

U C
32
W6

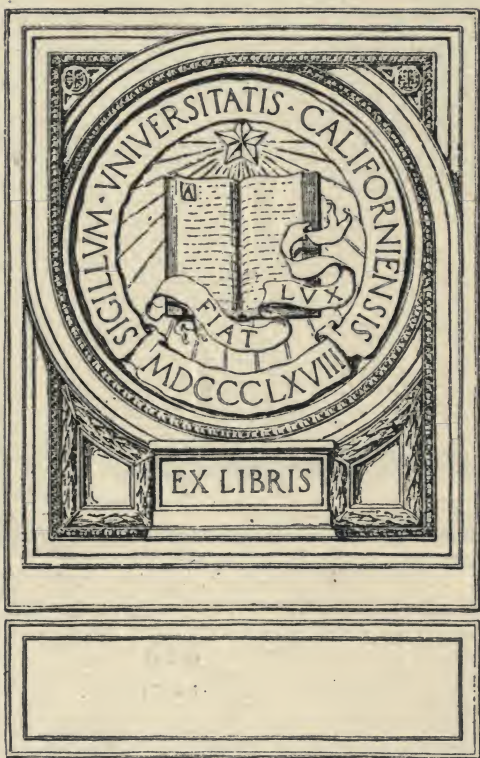
UC-NRLF



\$B 261 930


MANUAL FOR QUARTERMASTERS

CAPTAIN
ALEXANDER E. WILLIAMS





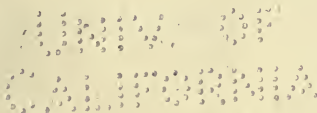
2747



Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

MANUAL *for* QUARTERMASTERS

CAPTAIN
ALEXANDER E. WILLIAMS



The Collegiate Press
GEORGE BANTA PUBLISHING COMPANY
MENASHA, WISCONSIN

UC32
W6

Copyrighted, 1916
BY
CAPTAIN ALEXANDER E. WILLIAMS

TO THE
LIBRARY OF THE
BUREAU OF THE ARMY

INDEX

CHAPTER I

Personnel

	PARAGRAPH
Accountability for funds and property.....	4
Duties of regimental Quartermasters.....	6-10
Supply Company.....	3

CHAPTER II

Transportation

	PARAGRAPH
Animals	23
Aparejo	40
Assignment of wagons.....	12 and 19
Blank forms	38
Combat wagons.....	18 and 20
Corral	17
Escort wagon.....	21 and 22
Express shipments	37
Field train	13
Forage.....	24 and 27
Kitchen car equipment.....	35
Loading wagons.....	14 and 19
Motor trucks.....	28-32
Pack train.....	40
Private mounts.....	25, 26 and 36
Railroad equipment.....	39
Railroad transportation.....	33-36
Ration section.....	15 and 16

CHAPTER III

Supplies

PARAGRAPH

Accountability for Cl. A1 supplies.....	50-53
Bakery Company.....	56-59
Bread, fresh and field.....	55
Equipment of Bakery Company.....	58
Fresh beef, inspection of.....	60
Rations	49
Ration return.....	45 and 54
Ration tables.....	49

CHAPTER IV

Property

PARAGRAPH

Fuel allowance for camp.....	80
Property accountability.....	64-66 and 70
Property with militia mustered into service.....	86
Straw for bedding.....	78
Unit equipment	61-63
Unserviceable property, disposition of.....	81 and 82
Woolen blankets, turn into depot.....	77

CHAPTER V

Finance

PARAGRAPH

Blank forms for money accounts.....	109
Bonds required of officers.....	88
Bonds required with contracts.....	99
Eight-hour day for employees.....	103
Engagement of services.....	91, 92, 94
Extra duty pay, when not allowed.....	105
Guaranty, when required.....	98
Computing time, monthly salaries.....	104
Payment of troops, by whom.....	90
Purchase of supplies.....	95-97
Reward for deserter or escaped prisoner.....	107
Transportation home for discharged soldiers.....	106
Traveling expense, civilian employees.....	101 and 102

CHAPTER VI

Miscellaneous Data

PARAGRAPH

Building plans and lists of material:	
For kitchens.....	134
For latrines.....	135
For latrine buildings.....	136
For picket line.....	137
Commissary chest equipment.....	120
Dimensions and weight of:	
Hospital tent and fly.....	122
Hospital ward tent.....	123
Pyramidal tent.....	124
Storage tent and fly.....	125
Wall tent and fly (small).....	127
Wall tent and fly (large).....	126
Farrier's pocket case (instruments).....	117
Field desks (contents).....	110
Flags	133
Horseshoer's equipment.....	118
Housewife (contents)	119
Poles, pins, etc., required for each tent.....	121A
Plan of camp for:	
Regiment of Infantry.....	128
Regiment of Cavalry	129
Regiment of Artillery	130
Road space required for Division.....	131
Set tools, carpenter and wheelwright.....	113
Set tools, farrier's and blacksmith's.....	111
Set tools, saddler's.....	112
Stencil plate set.....	110A
Tentage allowance for field.....	121
Veterinarian's field equipment (list of).....	114
Veterinarian's saddle-bags (contents).....	115
Veterinary medicines (month's supply).....	116
Water, daily requirements.....	132

INTRODUCTION

The object of this manual is to assist officers detailed as Quartermasters with troops in camp or in the field. The data contained herein are carefully prepared from existing orders, regulations and laws.

To insure the prompt supply of the articles of equipment necessary for an organization, the Quartermaster should, first of all, know (not guess) the quantity and kind of supplies required, then submit requisition for same stating on the face of the requisition the necessity for the articles enumerated thereon.

The requisition approved by the Commanding Officer should then be taken in person to the Division authority (usually the Quartermaster) for approval. Should a question come up at Division Headquarters as to the necessity for supplying any article, the Quartermaster of the organization will be there to explain.

This method will always result in expediting the supplies for an organization.

The policy which some Quartermasters pursue of asking for more than is required, expecting that the quantity asked for will be reduced, is entirely wrong, a relic of the old army and seldom if ever results satisfactorily.

Alexander E. Williams,
Captain, Q. M. C.

CHAPTER I

Personnel

1. Formerly regimental quartermasters and commissaries assisted by second lieutenants handled all supplies for troops in the field beyond the rail head or advance depot.

2. The recent law increasing the army did away with the regimental quartermasters and commissaries and the battalion quartermasters and commissaries, and provided instead a supply company for each regiment, assigning to that organization sufficient commissioned officers to look after the supply of the regiment.

3. Each Infantry Supply Company shall consist of one captain and one second lieutenant mounted; each supply troop of Cavalry shall consist of one captain and two second lieutenants; each supply company of a regiment of Artillery shall consist of one captain and one first lieutenant.

4. Existing laws permit the detail of regimental supply officers as assistants to post quartermasters when in garrison, but prohibit their being given accountability for post funds or property.

5. The object of this provision is to leave the regimental supply officers, to whom we will refer in this manual as regimental quartermasters, always free and ready to take the field with their commands. While in garrison the regimental quartermasters are to assist in supervising the procurement, issue and use of supplies and the engagement of services necessary for the commands to which they belong.

6. The quartermaster is a member of the staff of the regimental commander and as such is responsible that each organization of his regiment obtain its authorized quota of rations and equipment and that the latter is

8. MANUAL FOR QUARTERMASTERS

renewed whenever necessary to keep it always ready for field service. He may also be required to pay the organizations of his regiment when no officer of the Q. M. C. is available.

7. When a regiment takes the field alone the duties of the quartermaster are to rent camp sites, purchase necessary fuel and forage and to provide rations and other supplies. When the regiment is a part of a larger unit, the quartermaster must obtain information as to camping ground and procure fuel, forage, rations, etc., from the quartermaster in charge of the advance supply depot or line of communications.

8. On the march the senior regimental quartermaster assumes charge of all field trains in the Brigade, under direction of the Brigade commander.

9. When troops are transported by rail it is the duty of the quartermaster of an organization to arrange with the railroad agent for the necessary accommodations, inspect same, supervise the loading of supplies and animals, make assignment of organizations, marking on outside of each coach the number of men and their organization assigned seats in that coach.

10. During the trip the quartermaster should keep in touch with the representative of the railroad and arrange for the stops necessary for watering and exercising all animals. The feeding can usually be done without special stops.

CHAPTER II

Transportation

Wagon Transportation

12. The wagons assigned to a regiment are organized into field and combat trains. In the wagons of the combat train are carried the ammunition and entrenching tools, while the field train is composed of the wagons in which are carried the rations and baggage.

13. The field train is divided into two sections, the baggage section and the ration section. Each wagon should be plainly marked to show to which section it belongs.

14. When preparing for a march the wagons are placed and loading done under supervision of the quartermaster. After being loaded, the wagons of the ration and baggage sections are assembled and moved under his direction, while the combat wagons are assigned to battalions or other subdivisions and each follows immediately in rear of the organization to which assigned.

15. Under the present system when a command arrives at camp, after a day's march, the men have no rations in their haversacks except the two days' reserve which is to be used only in an emergency. So it is of utmost importance that the ration section be brought up and one day's rations issue as soon as possible after arrival of troops in camp.

16. The ration wagons which are unloaded must be sent back immediately to the rail head or distributing point to be refilled. The baggage wagons after being unloaded should be utilized for hauling wood and water needed in camp for preparation of meals.

17. A place should be designated as the corral, where the picket line will be stretched and all wagons required

to proceed there as soon as released from hauling around camp. No team should be unhitched before reporting at the corral, where the wagons are parked for the night all facing in direction to be taken when they move out next morning.

18. The combat wagons should report at the corral as soon as ammunition is unloaded and remain under direction of the quartermaster until sent by him to report to their respective organizations when the march is to be resumed.

19. The following table shows the allowance of wagons for each organization as given in the tables of organization:

	Infantry	Cavalry	Field Artillery
Field train, Ration section.....	8	17	14
Baggage section.....	4	5	3
Combat train.....	10	4	6

The wagon furnished for use of the army is known as the escort wagon and is constructed to carry 2500 pounds as normal load or 3000 pounds as maximum. Under no circumstances should the maximum load be exceeded, except under urgent military necessity. It is true the wagon will carry five thousand pounds, but one load as heavy as that will strain the parts so that the useful life of the wagon will be considerably shortened. So the overloading in the long run is not economical or in the interest of the service.

20. Supplies other than ammunition carried on combat wagons:

	M. G. C. or T. R. D.	Inf. BBTL	Cav. Sqd.	Art.	Eng.	Sig.
Medical property: Box reserve dressings.....		3	1	2	1	1
Litters.....	1	7	6	13	6	2
Ordnance property: Packs small arms ammunition.....		2	2	Articles required in combat which are not carried by the individual men		
Repair materials combat, chest.....	1	1	1			
Engineer property: Reconnaissance outfits.....	1	1	1			
Q. M. property: Axes.....	4	16	16			
Picks.....	4	16	16			
Shovels.....	8	16	16			
Total weight in pounds.....	{ Co. 430 } { To p. 490 }	625	600			

21. One escort wagon complete includes running gear; wagon body, 1 tongue; 1 double tree; 1 lead bar; 4 single trees; 6 bones; 2 lock chains; 1 wagon cover; 1 jakey box; 1 oscillating tool box; 2 padlocks with keys (for the 2 boxes); 1 driver's seat; 1 axle wrench.

Total weight, 2033 pounds.

22. Following list shows equipment required to be carried always with each wagon:

Extra Parts	Accessories	Harness Parts
2 Blocks break	1 Axe and handle	4 Buckles
1 Bolt, King	4 Bags, nose	$\frac{3}{4}$, $\frac{7}{8}$, 1, 2
6 Bolts, tire $\frac{1}{4} \times 2\frac{3}{4}'' \times 3''$	1 Brush, horse	2 Clips, trace
14 Bolts, wagon asstd. $\frac{1}{4} \times 1\frac{1}{2}''$ to $\frac{5}{8} \times 4''$	1 Bucket, G. I.	2 Hames
3 Links, open	1 Curry, comb	4 Rings
2 Nuts, axle	1 Globe, lantern	$\frac{3}{4}$, 1, $1\frac{1}{2}$, 2"
1 Wrench	4 Grease, axle pounds	3 Snaps
10 Rivets, iron	4 Halters and straps	1", $1\frac{1}{4}''$, 2"
3-16x1 $\frac{1}{2}$ and $\frac{1}{4} \times 1\frac{1}{2}$	1 Lantern	3 Straps hame
1 Tongue	1 Pick axe and handle	$\frac{1}{2}$ gal. oil neats-foot
1 Double tree	150 Rope, $\frac{3}{8}''$, feet	1 Soap harness pound
1 Single tree	1 Spade	1 Sponge pound
	1 Whip	1 Wire stone spool
	1 Wick, lantern	
Weight 106 pounds	1 Wrench, monkey	
	1 Turbine ball	
	Weight 83 pounds	

In addition to the above an extra set of fitted shoes with nails should be carried for each mule, and one extra hind wheel with each regimental train.

Public Animals

23. Following shows allowance of animals for each regiment, including attached sanitary troops:

	Horses		Mules		
	Riding	Draft	Draft	Pack	Riding
Infantry.....	47		108	17	6
Cavalry.....	1314		204	17	0
Artillery, light.....	401	684	68	1	0
Artillery, mountain.....	195	7 (Bell)	52	570	195
Artillery, horse.....	803	684	80	1	

24. The daily allowance of forage for animals is as follows: Horse, 12 lbs. grain, 14 lbs. hay, 3 1/3 lbs. straw for bedding; horse, large, 14 lbs. grain, 17 lbs. hay, 3 1/3 lbs. straw for bedding; mule, 9 lbs. grain, 14 lbs. hay, 3 1/3 lbs. straw for bedding. To each animal 3 pounds of bran may be issued in lieu of that quantity of grain.

The commanding officer may, in his discretion, vary the proportions of the components of the ration (1 pound of grain, 1½ pounds of hay, and 2 pounds of straw being taken as equivalents) and in the field may substitute other recognized articles of forage obtained locally, the variation or substitution not to exceed the money value of the components of the ration proper at the contract rates at time of change.

25. Mounts are furnished by the quartermaster corps for mounted officers below the grade of major, if they so elect; if they provide their own mounts they will be paid \$150.00 per year for one horse, and \$200.00 per year for two horses.

Officers of field rank will not be furnished mounts at government expense.

26. The authorized private mounts of an officer will be foraged, stabled and shod by the Q. M. C. at the officer's regular post of duty, when he is on leave of absence or when he is on duty, the nature of which

necessitates temporary separation from his mounts. The cost of grooming is not a proper charge against public funds.

27. Forage is furnished to the following number of horses:

Lieutenant General 4; Major General 3; Brigadier General 3; all other mounted officers 2.

Motor Truck Transportation

28. Motor trucks of one and one-half ton capacity have now been adopted for use on the line of communications. Eventually trucks will replace the mules and wagons in our field and combat trains, then take the place of draft horses in our field artillery.

29. The first organization of trucks ever used in our army, was on the line of communications when our troops entered Mexico in March, 1916.

30. The organization of Motor Truck Company:

1 Truckmaster	1 Trumpeter messenger
3 Assistant Truckmasters	28 Chauffeurs
1 Machinist	27 Motor trucks
1 Machinist helper	1 Repair truck
1 Cook	5 Motor-cycles
1 Watchman	

31. A ton and half truck should make an average of 5 miles to the gallon of gasoline, and 125 miles to the gallon of oil used. This is for all kinds of field service.

32. In a property book will be kept a descriptive list of all vehicles in a motor truck company, giving the quartermaster's number and the manufacturer's serial number of all machines and full particulars as to the equipment of each.

In this book will also be recorded the personnel of the motor company, giving the name, assignment and length of service of each person in the company, when and where first enlisted.

Railroad Transportation

33. For the transportation of troops by rail the following equipment is authorized when available:

For commissioned officers, standard sleeper, 3 to each section.

For enlisted men, standard tourist sleepers, 3 to each section.

For animals, Palace Arms Horse Cars, 18 animals to each car.

For freight, standard box cars.

For artillery guns and caissons and wagons, set up, flat cars.

When standard equipment is not available troops will be transported in any kind of cars available.

34. For preparing meals for troops on trains, baggage-cars are provided, in which is placed a kitchen-car equipment. If this equipment is not available, two field ranges, set up in boxes of dirt, in one baggage-car will be sufficient to prepare meals for four companies.

The baggage-car thus equipped should be so placed in the train as to have two companies ahead and two in rear of the mess car. Meals should be served to the men in the various cars by mess attendants, thereby avoiding the congestion which would result if the men should go to the mess car for their meals.

35. There are a limited number of kitchen car equipments owned by the Q. M. C., part of which are kept at St. Louis and part at San Francisco. The Pullman Car Co. also have a number of kitchen cars, but it is well to prepare for using field ranges for the regular kitchen car equipments are seldom obtainable.

36. The authorized private mounts will be transported by the Q. M. C. for the officers changing station and for graduates of the U. S. Military Academy, reporting for

duty with mounted organizations, subject to following restrictions:

a. When expense does not exceed \$100.00 for each horse transported.

b. Valuation for shipment not to exceed \$100.00.

c. That horses are actually owned and will be used in public service at new station.

d. Horses will be shipped from point of purchase to station of officer, provided he had no horse shipped on last change of station.

e. Horses may be shipped to a remount depot or to any place in U. S. for safekeeping, when an officer is ordered for duty beyond the sea.

f. Private mounts in excess of authorized allowance may be shipped on Government B/L provided cost of transportation is deposited with shipping quartermaster.

37. Shipments by express, when in excess of cost by ordinary freight must be limited to emergencies and shipments of delicate instruments.

38. Blanks required for making shipments of freight and passengers by rail are:

Transportation requests:

Bills of lading	{	Original, form No. 153 Q. M. C.
		Shipping order, form No. 156 Q. M. C.
		Memorandum, form No. 154 Q. M. C.

Reports of B/L and transportation requests, form No. 151 Q. M. C.

39. Railroad equipment required to move various organizations at war strength:

*Organizations	Personnel				R. R. Equipment required								
	Officers	Men	Animals	Vehicles	Guns Compl.	Pullman	Coaches	Baggage	Box	Stock	Flats	Total Cars	Trackage Feet
Infantry regiment.....	55	1890	177	22		5	43	5	15	9	8	85	5150
Cavalry regiment.....	54	1284	1436	26		8	28	6	25	72	9	150	7850
Artillery regiment, light.....	45	1170	1157	32	24	9	23	9	25	58	46	170	8675
Artillery regiment, horse.....	45	1173	1571	35	24	10	24	10	25	78	47	194	9830
Artillery regiment, mountain.....	45	1150	1229		24	7	23	7	30	61		124	6405
Sig. Corps field battalion.....	9	171	206	15		2	4	2	5	10	5	28	1460
Engineers pioneer battalion....	16	502	165	12		2	12	2	10	8	4	38	2110
Infantry Division.....	736	22295	7660	775	48	46	487	45	245	383	301	1507	82265
Cavalry Division.....	458	10259	12231	414	24	63	218	63	210	611	137	1302	77190

*Strength given was that of the organizations early in 1916.

Pack Transportation

40. Pack trains are used for transporting supplies where it is not practicable to use vehicles. The following is personnel and equipment for one pack train company:

1 Packmaster	14 Riding mules
1 Cargadore	50 Pack mules
1 Horseshoer	1 Bell horse
1 Cook	50 *Aparejos
10 Packers	14 Saddles

*The Aparejo complete with accessories consists of:

1 Aparejo body	1 Sobrejama
1 Aparejo cincha	1 Crupper
1 Corona or saddle pad	1 Pack blanket

2 Pack covers or mantas.

1 Last rope ($\frac{1}{2}$ inch, fifty feet long) with cincha and hook.

1 Sling rope ($\frac{3}{8}$ inch rope, 30 feet long).

2 Lair ropes (each $\frac{3}{8}$ inch by 30 feet long, with loop at one end).

CHAPTER III

Supplies

Supplies for Troops in the Field

41. The chief quartermaster of a field army, or other separate organized unit, will be responsible, under the direction of his commander, for the prompt and efficient supply of subsistence, clothing, fuel and other supplies for troops, and forage for animals, pertaining to the command.

42. **Method of Supply:** All supplies including subsistence will, so far as practicable, be furnished from stock or by purchase, or both, by the designated base or other depot upon properly approved requisitions, requests, ration returns, etc., or purchase locally, by chief or other quartermasters, or by requisitions or levies in the theatre of operations, and in such manner as may be directed by the commander of the field army or other separate organized unit.

43. **Supply of troops from base depot and advanced depots.** Requisitions for supplies required by units of a division should, unless otherwise directed by competent authority, be submitted periodically through proper channels to the division quartermaster, and by him consolidated or not, as may be deemed the most expedient, and sent direct to the base depot for supply; supply being made direct to the division, or to its units from the base depot or from the advance depot.

44. Rations are called class A1 supplies, when they are obtained from the post quartermaster in garrison and in the field from the quartermaster at the rail head or distributing point. In either case the regimental quartermaster draws rations in bulk for the organizations or detachments of his regiment, daily or at such times and places as the division commander may designate, and immediately distribute them to the various organizations.

45. The rations are obtained as follows. Each organization submits ration return for stated periods. These are consolidated by the regimental quartermaster, approved by the commanding officer, and submitted to the issuing quartermaster who makes the issue and uses the ration return as voucher for dropping the supplies.

46. Officers may be included on the ration return by name, but they are required to pay for rations drawn.

47. In garrison and permanent camp, each organization is credited with money value of the rations, on its return for a certain period. At the end of this ration period, the organization is charged with the value of rations drawn from the quartermaster during that period and paid balance, if any, in cash.

When troops take the field or are ordered to concentration camp, this system is suspended and rations are issued in kind. No money is paid for rations not drawn.

48. The commander of field forces has wide latitude in prescribing the ration to be issued. It should always be based on the reserve ration using that in whole or in part, supplemented by such other articles as are procurable locally.

In no case should the field ration be augmented to exceed in value the authorized garrison ration.

49. The following table gives components of the various rations:

A. Garrison ration ¹				B. Field ration (suggested)		C. Reserve ration
Components		Substitutive equivalents		Actual issues		
Articles	Quantities	Articles	Quantities	No. 1	No. 2	
	<i>Ounces</i>		<i>Ounces</i>	<i>Ounces</i>	<i>Ounces</i>	<i>Ounces</i>
Beef, fresh.....	20	Mutton, fresh.....	20	12	14	12
		Bacon.....	12			
		Canned meat.....	16		3.6	
		Fish, dried.....	14			
		Fish, pickled.....	18			
		Fish, canned.....	16			
		Turkey.....	16			
Flour.....	18	Hard bread.....	16	16		16
		Corn meal.....	20			
		Bread.....	18		16	
Baking powder.....	.08			4		4
Beans.....	2.4	Rice.....	1.6			
		Hominy.....	1.6			
Potatoes.....	20	Onions.....	20		14	
		Tomatoes.....	20	10	5	
		Other fresh vegetables.....	20			
Prunes.....	1.28			1.28	1.28	
		Apples, evaporated or dried.....	1.28			
		Peaches, evaporated or dried.....	1.28			
		Jam.....	1.28			
Coffee, roasted and ground.....	1.12			1.12	1.12	1.12
		Coffee, green.....	1.4			
		Tea.....	.32			

50. Subsistence Stores: In campaign accountability for subsistence stores terminates with their transfer to the divisions or other units—quartermasters in front of the advanced depot keeping accountability on forms furnished by the Quartermaster Corps and in accordance with printed instructions thereon. Base depots or other sources of supply will account for subsistence stores on authorized forms now in use and in accordance with Army Regulations, Manual for the Subsistence Department, and instructions printed on the forms.

51. Field return of subsistence stores: The field return of subsistence stores (Field Form No. 1 Subsistence) is for use as a memorandum record when troops are in the field in time of war beyond the advanced depots and is intended for use by any quartermaster making issues to troops, and will be prepared and kept as follows:

(a) It will be made up by the quartermaster and retained by him as a memorandum record subject to inspection at any time by proper authorities. When these returns, and vouchers thereto, become cumbersome and too bulky to be conveniently carried by the officer concerned, the books completed or filled up with vouchers thereto should be mailed to the Quartermaster General for storage and reference thereto when necessary.

(b) When the items are too numerous to be entered on front, the reverse side of the form will be used for abstracting invoices for stores received (Field Form No. 2), or receipts for stores transferred (Field Form No. 2), and for stores received on Field Form No. 22.

(c) The loss, destruction, or abandonment of any stores will be explained in column of remarks.

(d) If necessary two or more sheets of this return may be used, in which case the sheets used will be numbered serially and each sheet properly dated and signed by the accountable officer.

(e) All vouchers to the return must be numbered in one series.

52. Way Bill and Transfer Slip (Field Form No. 2): The Way Bill and Transfer Slip is to be used when troops are in the field in time of war beyond the advanced depots, and is intended for use by any quartermaster transferring stores.

53. It will be made up in triplicate, with carbon paper. The original (white) sheet will go forward with the stores to the consignee, signed by the consignor, as an invoice. The tissue sheet bearing the certificate of the shipping quartermaster (or his authorized deputy) that he has received the stores for shipment, will be retained by the consignor as his receipt for the stores and subsequently forwarded with his return of subsistence stores to the Chief of the Quartermaster Corps or filed with his field return as the case may be. The triplicate (blue) sheet will be given to the shipping quartermaster, who will, upon delivery of the stores, obtain the consignee's receipt thereon. When stores are lost, destroyed, or abandoned while in transit, the quartermaster will fill in the upper certificate on the reverse side of the original (white) sheet, and make a memorandum of the loss on the reverse side of the triplicate (blue) sheet. The consignee will execute the lower certificate on the reverse side of the original (white) sheet, and file it with his field return or subsistence stores.

54. Field Ration Return: The field Ration Return (Field Form No. 3) is to be used when troops are in the field in time of war beyond the advance depots and is for use by any quartermaster requiring rations or other subsistence stores.

55. Bread is supplied troops in the field, when practicable, from field bakeries which are attached to divisions when in permanent camp, or to line of communication when troops are campaigning. The bakeries produce

fresh bread when required for immediate consumption and field bread when required for shipment, or when considerable time must elapse between baking and consumption.

56. Bakery companies will be organized for war service at the rate of one for each division. A bakery company at war strength is divided into four sections of three units each.

The sections are lettered A, B, C, D, and the units are numbered from 1 to 12.

One section will supply bread for a brigade and one unit a war strength regiment of Infantry.

57. Personnel of War Strength Bakery Company:

Designation	Unit	Section	Company
Commissioned officer:			
Assistant to the quartermaster.....			1
Enlisted personnel:			
Chief baker—quartermaster sergeant or sergeant, first class, Quartermaster Corps (acting first sergeant and quartermaster sergeant).....			1
Assistant chief bakers—sergeants, Quartermaster Corps (in charge of sections).....		1	4
Bakers—sergeants or corporals, Quartermaster Corps (12 in charge of units; 8 others for assignment to duty with the company, or to detached subdivisions according to the necessities of each case).....	1	3	120
Assistant bakers—corporals or privates, first class, Quartermaster Corps.....	3	8	132
Cooks.....			12
Cooks or general police—privates, first class, Quartermaster Corps.....			12
Total enlisted personnel.....	4	12	61

¹ Authority is vested in the Chief of the Quartermaster Corps to substitute civilian employees in numbers not exceeding those here allotted for any enlisted men other than the chief and assistant chief bakers.

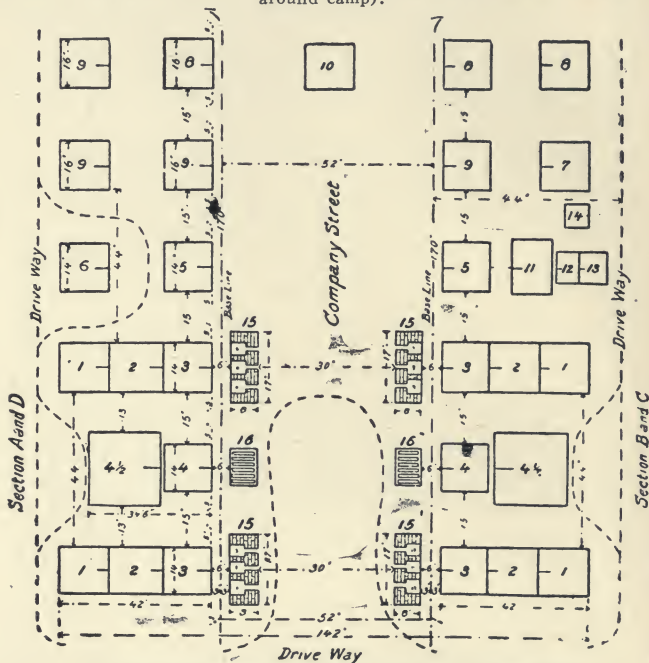
58. Equipment for bakery company.

	Unit	Section	Company
Axes.....	1	3	12
Boards, dam, for dough troughs.....	2	6	24
Brushes, bench.....	1	3	12
Brushes for greasing loaves.....	1	3	12
Brushes, scrubbing.....	2	6	24
Buckets, galvanized iron.....	3	9	36
Cans, sponge, nested.....	7	21	84
Clocks.....		1	4
Colanders, 12-inch.....	1	3	12
Covers, canvas, for bread racks.....	3	9	36
Covers, canvas, for dough troughs.....	2	6	24
Covers, canvas, for ovens.....	1	3	12
Covers, for sponge cans.....	1	3	12
Desks, field.....			1
Hatchets.....	1	3	12
Hoes, fire.....	1	3	12
Hooks, pan, 5 feet long.....	1	3	12
Lanterns, folding.....	2	6	24
Measures, gallon, graduated.....	1	3	12
Ovens, field.....	1	3	12
Pans, bake, 12 by 24 inches.....	36	108	432
Paulins, large and small (in number as required).			
Pennants.....			1
Pickaxes, with handle.....	1	3	12
Racks, bread, folding.....	3	9	36
Rakes.....	1	3	12
Ranges, No. 2, complete.....		1	4
Scales.....	1	3	12
Scoops, large.....	1	3	12
Scrapers, dough.....	2	6	24
Shovels, long handle.....	1	3	12
Sieves, flour, 13-inch.....	1	3	12
Stoves, Sibley, complete.....	1	3	12
Tables, molding.....	1	3	12
Tents, wall, large, open at both ends.....	2	4	18
Tents, storage.....			2
Tents, pyramidal, large.....	1	2	8
Tents, pyramidal, small.....			3
Thermometers, oven.....	1	3	12
*Transportation, motor, wagon, etc. (as required).			
Troughs, dough.....	2	6	24
Wrenches, monkey, 8-inch.....	1	3	12

*To be supplied for interior service, supply and transport, as circumstances attending the operations of the bakery company or its detached subdivisions may require.

Camp of a Bakery Company, Ground Plan

Square feet space 30,000, approximately (including 12-foot roadway around camp).



1. Wall tents, large, open both ends (4), mixing tents.
2. Wall tents, large, open both ends (4), molding tents.
3. Wall tents, large, open both ends (4), proofing tents.
4. Wall tents, large, open both ends (2), bread tents.
- 4½. Storage tents (2), bread tents.
5. Wall tents, large, open both ends (2), flour tents.
6. Wall tents, large, open both ends (1), property tent.
7. Wall tents, large, open both ends (1), mess tent.
8. Pyramidal tents, large (3), sleeping tents (20 corp, bakers).
9. Pyramidal tents, large (4), sleeping tents (32 asst. bakers).
10. Pyramidal tents, large (1), sleeping tent (5 chief bakers).
11. Paulin, large (1), kitchen.
12. Pyramidal tent, small (1), storage (mess).

13. Pyramidal tent, small (1), cooks (2).
14. Pyramidal tent, small (1), cooks, police (2).
15. Ovens.
16. Wood piles.

Summary:

- 18 wall tents, large.
- 2 storage tents.
- Paulins, large and small, as required.
- 8 pyramidal tents, large.
- 3 pyramidal tents, small.

60. Specifications for fresh beef: To be good in quality and condition, fit for immediate use, and equal numbers of fore and hind quarters to be delivered, including all the best cuts; no carcass to weigh less than 500 pounds when trimmed; necks to be cut off perpendicularly to the line of the vertebrae, leaving but three of the cervical vertebrae on the carcass; the shanks of the fore quarters to be cut off at the knee joint and of hind quarters at the hock joint (commercial cut) and, to compensate for the shank bone, thus allowed to remain, $2\frac{1}{2}$ pounds will be deducted from the weight of each fore quarter and $3\frac{1}{2}$ pounds from each hind quarter; difference in weight between fore and hind quarters not to exceed 25 pounds per carcass (one rib to be left on each hind quarter.)

Necks, kidney fat, beef from bulls and stags, and from females (except from spayed heifers) will be excluded from delivery.

CHAPTER IV

Property

61. In publishing G. O. 39 W. D. 1915, it was the intention to prescribe a unit equipment, for each organization, which would contain every article of quartermaster property or supplies authorized for field service.

62. The articles of the equipment should be drawn in bulk by the regimental quartermaster and issued by him to each organization. He receipts to the depot quartermaster issuing the supplies, takes them up on a field property return and distributes them to the various organizations. From each organization he obtains a receipt, not for the individual articles but for one equipment A, B, or C, complete.

63. Thereafter when an article of the unit equipment becomes unserviceable it is taken to the regimental quartermaster and is replaced by a serviceable one. If lost, the organization commander submits to the quartermaster an approved survey, fixing responsibility, and obtains a serviceable article.

Unserviceable articles turned in to the regimental quartermaster are disposed of by him as provided in A. R.

64. **Other property of the quartermaster corps:** Accountability for other supplies and property of the Quartermaster Corps of the expendable class, such as stationery, blank books, memorandum books, scratch or memo. pads, duplicating and triplicating books, rulers, paper folders, veterinary medicines and dressings, horse and mule shoes, horseshoe nails, brooms (stable and corn), brushes, nails, lumber, paints, oils, wicks and other lamp and lantern parts, repair parts for harness, leather, repair parts for wagons, repair parts for auto trucks, hames, collars—horse, bolts assorted, iron and steel assorted, hatchet, axe and other

handles, twine, rope, whips, tongues and wheels, wagon, links, rivets and burrs, single and double trees, saddler materials consumed in making repairs, bows, wagon, screws, paper, wrapping and other supplies actually consumed in the maintenance and upkeep of troops in the field, fuel and forage, and clothing for issue to enlisted men, terminate with their transfer to the division or other organized unit.

65. Officers making transfers of fuel and forage to divisions or other units will show on vouchers dropping same from their accountability the number of men for fuel and animals for forage.

66. Quartermasters of divisions or other quartermasters making purchases of supplies and paying for same, will be required to account for same on property account (Q. M. C. Form No. 200), taking credit thereon for issues and transfers.

67. Receipts for expendable supplies will be taken by the base or other depot or supply point on Q. M. C. Form No. 201, combination invoice and receipt, and same used as a voucher to property account and disposed of as directed herein. These supplies will not be invoiced to consignee, but a copy of the receipt for the supplies will be furnished him for his information. Clothing will be requisitioned for and receipted for when practicable on Q. M. C. Form No. 213, and this form when so used becomes a voucher to property account. If transfers of clothing are made in bulk to regimental or other quartermasters, receipts will be taken on Q. M. C. Form No. 201, and such quartermasters will either account for the clothing or furnish the officer making the transfer of same with completed receipts on Q. M. C. Form No. 213 showing issues to organizations. These receipts to be filed as sub-vouchers to voucher of officer making transfer.

68. Supplies not expendable will, when supplied for use of troops in the field, be invoiced to the regimental, battalion, squadron, or other quartermaster to whom transferred, and shall be accounted for by such officers in prescribed manner, and on prescribed forms.

69. Quartermasters to whom supplies of the expendable class are issued for distribution, will be held responsible for the proper distribution thereof, and officers to whom such supplies are distributed will be held responsible for the proper application thereof.

70. **Method of accounting for property of the quartermaster corps other than subsistence stores:** Q. M. C. Form No. 200 will be used for accounting for all property of the Quartermaster Corps (except subsistence stores). This form will be filed in a loose leaf binder furnished by the Chief of the Quartermaster Corps for the purpose.

71. Articles accounted for in the property account should for convenience be arranged in groups as follows:

- (a) Clothing.
- (b) Equipage.
- (c) Other Quartermaster Supplies.

72. **Vouchers to property account:** Vouchers covering transactions incident to the procurement or receipt of supplies and property are debit vouchers and vouchers covering transactions incident to the issue, transfer, or other disposition of supplies and property are credit vouchers.

73. These vouchers are:

DEBITS

Form 217a, Q. M. C.—Duplicate of Memorandum Voucher covering Purchases.

Form 210, Q. M. C.—List of Articles Received from Various Sources.

Form 201, Q. M. C.—When used in an invoice of Property Transferred.

CREDITS

Form 201, Q. M. C.—When used as a receipt for Property Received.

Form 203, Q. M. C.—Monthly List of Stores Expended.

Form 204, Q. M. C.—Requisition for Stationery. Issues on this form may, if desired, be consolidated and entered on Form 203.

Form 205, Q. M. C.—Articles Lost or Destroyed.

Form 206, Q. M. C.—Receipt Roll Recruit Kits.

Form 207, Q. M. C.—Certificate of Breakage of China and Glassware.

Form 208, Q. M. C.—Statement of Charges on Muster and Pay Roll.

Form 209, Q. M. C.—Abstract of Issues of Forage, Mineral Oil, Salt and Vinegar.

Form 211, Q. M. C.—Requisition for Fuel.

Form 213, Q. M. C.—Requisition for Clothing.

Form 214, Q. M. C.—Statement of Public Property Purchased (Voucher covering sales to officers).

Form 215, Q. M. C.—List of Articles sold to Officers, etc.

Form 228, Q. M. C.—Issue of Toilet Articles to Prisoners.

Form 45, Q. M. C.—Account sales at auction.

Form 196, A. G. O.—Report of Survey.

Form 1, I. G. O.—I. and I. Report.

Form 229, 243 and 242—Memorandum receipts.

74. Vouchers to a property account will be posted to the account currently, marked "posted" and one copy mailed direct to the Office of the Chief of the Quartermaster Corps for posting in property account in his office.

75. **Numbering Vouchers:** Vouchers to a property account will be numbered serially for each fiscal year from the first day (July 1st) of each year, or the date on which the property account is first opened, to and including the last day (June 30th) of the fiscal year.

76. All property transactions occurring in or pertaining to a fiscal year should be closed on or as quickly as possible after June 30th each year, and the vouchers covering same given serial numbers and posted to the property account to which they pertain, except in the case of vouchers unavoidably delayed for a considerable period after the close of the fiscal year in which transaction covered by them occurred. Such vouchers will be numbered in the series for the new fiscal year.

77. When the woolen blankets become unserviceable and are condemned, they will not be sold locally, but will be shipped to a depot to be sold as old rags.

78. In camp each soldier may be issued 30 pounds of straw or hay per month, in lieu of a mattress.

79. Section 1298 Revised Statutes; authorize the gratuitous issue of clothing to enlisted men to replace articles destroyed to prevent the spread of contagious diseases, upon the certificate of an officer that the clothing was so destroyed upon the recommendation of the medical officer named.

80. Allowance of fuel in camp:

For each authorized mess— $1/12$ cord per day.

For each kitchen pit— $1/12$ cord per day.

These allowances may be increased by the commanding general in the field, if found to be inadequate.

81. Disposition of unserviceable property.

1. The articles named in List A and List B herein are supplied by the Quartermaster Corps for issue to troops, and are considered as expendable under the conditions set forth in the heading of each list.

LIST A

2. Lists of articles of supplies of the Quartermaster Corps of minor quality to be expended when worn out by fair wear and tear in the public service when, in the opinion

of the commanding officer, they have no material salable value. The certificate of expenditure submitted by the accountable officer and approved by the commanding officer should be supported by a certificate of a disinterested officer that the property has been destroyed in his presence. When, however, any of the articles specified in List A have, in the opinion of the commanding officer, a salable value, such articles should be submitted to an inspector. Articles ordered destroyed may be broken up and serviceable parts thereof used in making repairs.

Adzes.

Aprons, rain (ambulance).

Aprons, blacksmiths'.

Axes.

Ax slings.

Arresters, lightning.

Atomizers, insect exterminator.

Augurs, hollow and adjustable.

Augurs, post-hole.

Awls, assorted.

Bags, plumbers', carpet.

Barrels, assorted.

Barometers.

Baskets, assorted.

Basins, assorted.

Bellows, hand, insect powder.

Bells, call, desk.

Belts, lineman's.

Bits, for braces.

Blotters, hand.

Blowers, stove.

Blow pipes.

Boards:

Clip.

Drain.

Stove.

Boilers, cooking, except those with copper bottoms.

Books:

School.

Dictionary.

Boots, rubber, hip.

Borers, tap.

Bouncers, saddlers.

Boxes, shoeing.

Broilers, assorted.

Brushes:

Artists'.

Dusting.

File.

Floor.

Flue.

Horse.

Kalsomine or whitewash.

Lettering.

Marking.

- | | |
|------------------------|-------------------------------------|
| Paint. | Collars, dog. |
| Plasterers'. | Combs, curry. |
| Roof. | Compasses. |
| Shellac. | Cookers, porridge. |
| Sink. | Coolers, water. |
| Stencil. | Corkscrews. |
| Tar. | Creasers. |
| Tube. | Crimpers. |
| Typewriter. | Curves, drafting. |
| Varnish. | Cuspidors (except brass or copper). |
| Window. | Cutters: |
| Buckets: | Biscuit. |
| Ash. | Cake. |
| Fire. | Doughnut. |
| Galvanized. | Glass, wheel. |
| Calipers. | Glass, diamonds, glaziers. |
| Candlesticks. | Diggers, post-hole. |
| Cans: | Dippers, enamel-ware. |
| Ash. | Dividers, assorted. |
| Oil. | Drainers, assorted. |
| Sprinkling. | Dressers: |
| Caps, cooks'. | Boxwood. |
| Cases, pillow. | Emery. |
| Chains, hobble. | Grindstone. |
| Chairs, folding, camp. | Dusters. |
| Chairs, desk. | Edgers (edge tools). |
| Choppers, food. | Erasers, steel. |
| Clamps: | Expanders, tube. |
| Lineman's assorted. | Files: |
| Pipe. | Document, box. |
| Saw. | Letter, box. |
| Woodworkers'. | Mechanics'. |
| Cleaners, assorted. | Shannon or board. |
| Cleavers, meat. | Shoemakers'. |
| Climbers, pole. | Fillers, oil can. |
| Clips: | |
| Board. | |
| Letter. | |

Filters:	Copying or manuscript.
Oil.	Distress signal.
Water.	Pipe.
Flatters.	Signal, carton.
Forks:	Toilet paper.
Hay.	Tumbler.
Manure.	Twine.
Straining, saddlers'.	Hoods, boat.
Frames:	Horses, stitching.
Blue print.	Hose, assorted.
Hacksaw.	Inkstands or wells, assorted.
Holystone.	Irons:
Fullers, blacksmiths'.	Branding.
Funnels:	Calking.
Enamel-ware.	Clinching.
Tin, ordinary.	Firing.
Gauges, assorted.	Pricking.
Gimlets.	Rounding.
Gloves, rubber.	Soldering.
Gouges.	Jackets, cooks', and waiters'.
Graters, kitchen.	Jacks, wagon.
Griddles.	Kettles, tea, enameled ware.
Grinders, emery.	Knives:
Grindstones, complete.	Drawing.
Groovers, tinnners', hand.	Farriers'.
Halters, assorted.	Food chopper.
Hammers.	Mast.
Handcuffs.	Packing.
Hardies.	Pruning.
Hatchets.	Putty.
Hobbles.	Saddlers.
Hods, coal.	Sheath.
Hoes, assorted.	Ladders.
Holders:	
Bit.	

Ladles:	(Transports and harbor boats.)
Melting.	
Plumbers'.	Pliers.
Ladles, soup, enameled ware.	Pointers, spoke.
Lamps, street.	Pokers:
Lanterns.	Fire and stove.
Mallets.	Oven.
Marlin spikes.	Pots:
Mattocks.	Coffee, enamel ware.
Mauls.	Enamel.
Measures:	Glue.
Tin, not copper bottom.	Marking.
Tape.	Solder.
Mills, paint.	Tea (other than with copper bottoms).
Mimeographs or duplicators.	Preservers, life.
Nets, fly, horse.	Presses, staple.
Nippers:	Prickers, saddlers', and sailmakers'.
Hoof.	Pritchels.
Nail cutting.	Pullers, nail.
Saddlers'.	Pulleys.
Nozzles, hose.	Punches (except bond or check).
Oars.	Racks:
Oilstones.	Axe.
Openers, box.	Bucket.
Padlocks.	Hose.
Pans, assorted. (Except copper pans.)	Pen.
Parers, hoof.	Stamp, revolving.
Picks:	Towel.
Ice.	Whip.
Masons'.	
Pike poles.	Rakes.
Pincers.	Rasps.
Planes.	Reamers.
Plates, breakfast, china.	

- Reels:
 Chalk-line.
 Hose.
Rounders, rein.
Rivet Sets.
Rulers:
 Carpenters'.
 Office.
Scoops, assorted.
Scrapers:
 Boat.
 Box.
 Floor.
 Paint.
 Plumbers'.
 Store.
Screw drivers.
Screw plates.
Scythes.
Shackles.
Sharpeners, pencil.
Sickles.
Sieves, flour.
Skillets.
Slickers, saddlers'.
Snips, tinnners', hand.
Spokeshaves.
Sprinklers, lawn.
Squillees.
Stands:
 Calendar.
 Water-cooler.
Starters, bung.
Steamers, for boilers.
- Stencils (outfits for marking boxes).
Stools:
 Camp.
 Mess.
Strainers:
 Coffee.
 Paint.
Stretchers, wire.
Swages.
Tables:
 Camp, folding.
 Saddlers', folding.
Tampers.
Tanks, oil and assorted.
Tap borers.
Tapes, measuring, linen.
Thermometers, except oven.
Ticklers, saddlers'.
Tongs:
 Blacksmiths'.
 Fire.
 Ice.
Towels.
Traps, rat.
Triers, grain.
Trowels.
Tubs.
Turners, cake.
Weeders.
Weights:
 Hitching.
 Paper.
Wringers, mop.

Kitchen Utensils

Bowls, chopping.	Ladles, soup.
Choppers, meat.	Openers, can.
Dippers.	Pans:
Forks:	Dish.
Carving.	Frying.
Meat.	Sieves, flour.
Graters.	Skimmers.
Knives:	Spoons:
Bread.	Basting.
Butcher.	Mustard.
Carving.	Steels, carving.

Camps and Garrison Equipage

Bags:	Sacks:
Barrack.	Bed.
Recruit clothing.	Pillow.
Surplus kit.	Sheets, bed.
Bars, mosquito.	Slings:
Brassards.	Bugle.
Cases:	Color.
Color.	Drum.
Drum.	Stamps, company marking.
Guidon.	Stands, music.
Pillow.	Sticks:
Chairs, barrack.	Drum.
Color staffs.	Shoe size.
Covers, mattress.	Stretchers, shoe.
Halyards.	Tape, foot measure.
Head nets, mosquito.	Tent chains.
Poles, tent, all kinds.	Tent Tripods.
	Whistles.

Veterinary Supplies

Basins, granite.	Needles:
Blades, for dental floats.	Seton.
Blowers, powder.	Suture.
Bottles, drenching.	Operating hood.
Charts, veterinary.	Rasps, tooth.
Droppers, medicine.	Razors.
Funnels, enamel.	Roller, bandage.
Gloves, rubber.	Shakers, powder.
Glasses, graduate.	Spatulas.
Holders, needle.	Syringes,
Hone, oil.	Tiles, pill.
Knives, hoof, horseshoers'.	Trays:
Mallets, rawhide.	Enameled.
Needle holders.	Tin.

Articles used by applicants for enlistment:

Brooms, whisk.	Combs, medium.
Brushes:	Towels, huckaback.
Blacking.	
Hair.	

LIST B

82. List of expendable articles of supplies of the Quartermaster Corps to be expended only when actually issued for use in the maintenance and upkeep of the public service and when *issued* to troops.

Acetone, paint and varnish dissolvent.

Acids, all kinds.

Adjusters, lamp cord.

Alcohol.

Alum.

Ammonia.

Asbestos:

Cement (see Cement).

Millboard.

Packing (see Packing).

Wicking.

Asphaltum.

Ax helves.

Axles, assorted.

Bags:

Canvas, ash.

Carbon.

Coal.

Coffee, for portable gas-cooker equipment.

Cotton.

Gunny.

Paper.

Ball stems.

Balls:

Float.

Fuller.

Steel bearing.

Assorted.

Bands, for wagons and harness.

Bands, rubber (stationery).

Barrels for packing and shipment of property.

Bars:

Grate, for furnaces, heaters, and the like.

Wagon.

Baths, shower, repair parts for.

Batteries:

Wet and dry.

Electric, repair parts.

Beams, assorted, for wagons.

Beds, assorted, for wagons.

Beeswax.

Bells, assorted, when installed as permanent fixtures.

Belt:

Compound.

Dressing.

Fasteners.

Lacings.

Belting, when installed with machinery.

Bends, assorted, for pipe.

Benzine.

Bibbs, assorted.

Binders, staple (see Fasteners, paper).

Binding posts, electric bell.

Bits, bridle and harness.

Blacking, edge.

Blades, assorted.

Blinds, bridle.

Blocks:

 Brake, wagon.

 Scratch, assorted (stationery).

Blowers, insect powder.

Bluing.

Boards, assorted for wagons and carts.

Bodies:

 Chandelier, parts of.

 Wagon and cart.

 Boilers, repair parts for.

Bolsters, wagon.

Bolts, assorted.

Bon Ami.

Books, blank, letter copying, memorandum, etc.

Borax.

Bottoms:

 Chair.

 Assorted, wagon and cart.

Boxes:

 Wood, wagon.

 Outlet.

 Packing.

 Service, plumbers.

Boxings, wheel, wagon and cart.
Braces, assorted for wagons and carts.
Brackets, assorted.
Brads, assorted.
Brakes, wagon.
Branches, sewer and iron pipe.
Brass.
Breechings, harness.
Bricks, assorted.
Bristles.
Bronze, rod.
Brooms, assorted.
Brushes:
 Scrubbing.
 For greasing loaves of bread.
Buckles, harness and assorted.
Buckram.
Buckskins.
Buffers.
Bulbs for gasoline furnace.
Bumpers, rubber.
Bunting.
Burlap.
Burners, lamp, street lamp, and gas.
Burrs, assorted.
Bushings, assorted.
Buttons:
 Assorted, for vehicles.
 Door.
 Push.
Buzzers.
Cable, electric light.
Cable to connect carbon holders.
Calcium chloride.

Calendars:

Desk.

Pad.

Calks, toe.

Candles.

Canopies, wall and ceiling.

Canvas.

Caps:

Brass (see Fittings).

Galvanized iron (see Fittings).

Hydrant (see Fittings).

Iron (see Fittings).

Carbons, electric.

Cards:

Index.

Record, etc.

Cardboard.

Cases, fuse.

Casters, furniture, etc.

Castings, range, stove, heaters, etc.

Catches, door, cupboard, transom, etc.

Cement, all kinds.

Centers, neck yoke.

Chains, assorted, except measuring chains.

Chalk.

Chalkline.

Charcoal.

Charge, fire extinguisher.

Charts, assorted.

Checks, door.

Chimneys, lamp, assorted.

Chucks, assorted.

Cinchas.

Clamps:

Basin.

Belting.

Hose.

Clasps, assorted.

Clay, fire.

Cleats.

Clevises, wagon, etc.

Clips:

 Harness and wagon.

 Spring.

Closets, water.

Cloth.

Clothespins.

Clusters, electric, when installed.

Cocks, assorted (see Bibbs) and repair parts:

Coffins.

Coils, spark.

Collars:

 Stovepipe.

 Harness.

Columns, water.

Compounds, all kinds.

Composition, seam.

Compressors, repair parts.

Connections, assorted.

Copper.

Coppers, soldering.

Cords, assorted.

Cotters, assorted.

Cotton, calking.

Couplings, assorted.

Covering, pipe.

Covers:

 Barrel.

 Canvas oven.

 For pots and kettles.

 Trough.

Crayons.
Crocks.
Crosses (see Fittings, pipe).
Cross arms.
Cross overs.
Crowns, bridle.
Cruppers.
Cups:
 Leather.
 Grease, drip and oil.
Curtains, sets.
Cushions, seat.
Cut outs.
Dampers, stovepipe.
Dash boards.
Daters, rubber.
Dees, assorted.
Deflectors.
Denim.
Dials, clock.
Diaphragms.
Disks, valve.
Disinfectant.
Dogs, cam.
Doubletrees.
Drains, boat and floor.
Dressing, assorted.
Drier, Japan and patent.
Duck, cotton and rubber.
Dust, emery.
Dynamos, repair parts for.
Eccentrics for cocks.
Elbows, assorted.
Electroliers.

Electrolite.
Electro silicon.
Ells.
Emery, powdered.
Enamel, stove.
Engine, repair parts for.
Envelopes.
Erasers, rubber.
Erasing fluid.
Excelsior.
Exterminators, insect.
Eyelets.
Eyes, bolt, etc.
Fasteners, assorted.
Faucets.
Feeders, salt, roto.
Felloes, assorted.
Felt.
Fenders.
Ferrules.
Fids.
Files, general order and special order.
Fillers, book.
Filter, material.
Finish, hard oil.
Fittings, pipe and assorted.
Fixtures:
 Ceiling.
 Grindstone.
 Shower bath.
 Assorted.
Flags:
 Advertising, recruiting.
 Other special flags.
Flagpoles, recruiting.

Flagstaffs, when erected.
Flanges.
Floats, for flush tanks.
Flues, assorted.
Flue stoppers.
Folders, paper.
Founts, lamp and lantern.
Frames, assorted.
Fringe.
Fronts, bridle.
Furnaces, repair parts for.
Furniture, office, repair parts for.
Fuses, assorted.
Galleries, chimney.
Gaskets.
Gasoline, except when used as fuel.
Gates, molasses.
Gates, wagon.
Gauge, glasses.
Gauges, repair parts for.
Girths, saddle.
Glass, window.
Glasses:
 Ambulance.
 Port hole.
 Wagon lamp.
Globes:
 Arc lamp.
 Lamps.
 Lantern.
 Marine lamp.
 Street lamp.
Glue.
Glycerine.
Gold Dust.

Gold leaf.
Goosenecks.
Governors, pump.
Graphite.
Grate bars.
Grate bar washer supports.
Grates, assorted.
Grease, assorted.
Grenades, hand.
Grips, wire.
Grommets.
Guards, lamp, wire.
Guards, tent.
Hair, assorted.
Hames, assorted.
Handles, all kinds.
Hangers, assorted.
Hasps and staples.
Head raisers.
Heads, shower.
Heaters, feed water, repair parts for.
Heating apparatus, repair parts for.
Hectograph compound.
Hinges, all kinds.
Hose.
Holders, lamp.
Holystones.
Hoods, forge, range and arc lamp.
Hooks and eyes.
Hooks and staples.
Hooks, assorted.
Hoops, barrel.
Hounds, wagon.
Housings, harness.
Hubs, wagon.

Hydrants, when installed.
Injectors, repair parts for.
Ink.
Insecticide.
Insulators.
Iron, assorted.
Ironers, parts of.
Irons, wagon.
Jars, battery.
Jaws, assorted.
Jointers, pipe.
Jute.
Kegs, assorted.
Kingbolts.
Knobs, assorted.
Labels.
Lacing, belt.
Lacquer.
Lamps, Army, repair parts for.
Lampblack.
Lashes, whip.
Latches.
Latrines, when permanently installed.
Lavatories, when permanently installed.
Lead, sheet and calking.
Leads:
 Pencil (refills).
 Sounding.
Leather, assorted.
Levers for pumps.
Levers, brake.
Lifts, sash and transom.
Lifters, stove.
Lime.
Lime, chloride.

Linchpins.

Lines:

Chalk.

Lacing.

Lead.

Log.

Other lines.

Links, assorted.

Linings, range.

Linoleum.

Litharge.

Lock poles.

Locks, assorted, except padlocks.

Loops and rings.

Lubricating compound.

Lumber.

Lye.

Magnesia.

Magnets.

Mangles, parts of.

Mantles, gas.

Maps, wall.

Marline.

Martingales.

Mashers, potato.

Matches.

Matting.

Mats.

Medicines.

Menders, hose.

Metal.

Mica.

Mineral oil, except for fuel.

Mixture, paraffin.

Mops.

Moss.
Mucilage.
Nails, assorted.
Needles, assorted, except veterinary, seton and suture.
Nipples, pipe.
Nuts, assorted.
Oakum.
Oil board, mimeograph.
Oil, all kinds, except for fuel or lighting.
Oilcloth.
Ornaments, harness.
Overflows.
Packing, assorted.
Pads, desk and assorted.
Paints.
Palms, assorted.
Paper, assorted (stationery, etc.).
Paraffin.
Parts, for repairs (all kinds).
Paste, assorted.
Patches, curtain.
Pearline.
Pencils, assorted.
Penholders.
Pendants.
Pens, assorted.
Pickets, fence.
Pins, assorted.
Pipe, assorted.
Pipes, assorted (blow, hose, etc.).
Piston rods.
Pitch, coal.
Plaster of Paris.
Platens, typewriting.

Plates:

Floor and step.

Wagon.

Plugs, assorted.

Plumsoil.

Plungers, pump.

Points, assorted.

Poles, assorted.

Polish, assorted.

Posts, fence.

Potash.

Pounce.

Powder, insect, washing, and polishing.

Protectors, pencil-point.

Pulls, door, etc.

Pumice.

Pushes, floor.

Putty.

Radiators, repair parts for.

Ranges, repair parts for.

Ratchets, brake.

Reducers.

Reins, harness.

Reflectors, lamp.

Regulators, pressure, repair parts for.

Remover, paint or varnish.

Renewals, battery.

Resin.

Risers, seat.

Ribbons, typewriter and adding machine.

Rings, harness, etc., assorted.

Rivets and burrs.

Rivets.

Rockets, distress.

Rods, wagon.

Rollers, assorted.

Rope.
Rosettes, harness and ceiling.
Rosin (resin).
Rottenstone.
Rowlocks.
Rubber, assorted.
Runners, sleigh and wagon.
Sal ammoniac.
Sal soda.
Salt.
Sapolio.
Savögan.
Sawdust.
Screw eyes.
Screws:
 Lag or coach.
 Lamp.
 Machine.
 Thumb.
 Wood.
Seals, adhesive or wax.
Seats, assorted.
Shackles, screw.
Shades:
 Lamp.
 Window.
Shafting.
Shafts, wagon, etc.
Shades, window, when installed.
Shakers, grate and stove.
Shellac.
Shields, buckle and erasing.
Shoes:
 Brake.
 Horse and mule.
 Pipe, down spout.

Sides, wagon.

Signals, distress.

Silk:

 Mimeograph and neostyle.

 Sewing.

Singletrees, wagon.

Skeins, wagon.

Skins:

 Buck.

 Chamois.

 Sheep.

Slabs, basin.

Slate, roofing.

Slates, school.

Slats, ambulance top.

Slides, assorted.

Snaps, assorted.

Snaths, scythe.

Soap, assorted.

Socket, assorted.

Soda.

Soil, plumbers'.

Solder.

Spanners, assorted.

Specter.

Spikes.

Splices, trace.

Spokes, wheel.

Sponges.

Spots, harness.

Spouts, oil can.

Sprayers, insecticide.

Spreaders, lamp.

Stamps, rubber and rubber dating.

 Postage. (For registry purposes only.)

Squares, bridle and halter.

Staples and burrs.

Staples, assorted.

Starch.

Stationery.

Stays:

Chain.

Winker.

Steel, assorted.

Stems, fuller with balls.

Steps, wagon.

Sterilizers, repair parts for.

Sticks, spreader.

Stirrups.

Stocks, wood.

Stones:

Emery.

Grind.

Oil.

Rotten.

Scythe.

Stoppers:

Basin and bath.

Flue.

Stops:

Door.

Waste, etc.

Stovepipe.

Straps:

Harness.

Calking.

Hose.

Pipe.

Strings, hame.

Sulphur.

Surcingles.

Swabs, cotton, etc.

Switches.

Swivels.

Tacks.

Tags.

Tallow.

Tanks, assorted.

Tape, except measuring.

Taps, assorted.

Tar.

Tees.

Tees and ells.

Test plugs.

Thimbles:

 Saddlers.

 Stovepipe.

Thinner, anticorrosive.

Thread.

Tickets, street car, bridge, etc.

Ticking.

Tin.

Tires.

Toggles.

Toilet paper.

Tongues, wagon.

Traces.

Traps, lead.

Trees:

 Double.

 Single.

 Whiffle.

Tripods, lamp shade.

Troughs, eave.

Tubes, boiler, etc.
Tubing.
Tugs, harness.
Tumblers.
Turnbuckles.
Turns, cupboard.
Turpentine.
Tuyere irons.
Twine.
Urinals, repair parts for.
Unions.
Valves, assorted.
Varnish.
Vaseline.
Ventilators, repair parts for.
Ventilators and bases for.
Wadding, cotton.
Washers, assorted.
Waste, cotton.
Wax.
Webbing, assorted.
Wheels, assorted.
Whetstones.
Whips.
Whiting.
Wicking.
Wicks.
Wire.
Wool, mineral.
Yokes, neck.
Zinc, battery and sheet.

Camp and Garrison Equipage

Bedsteads, parts for.
Brackets, flagpole.

Brooms, corn.

Brushes, scrubbing.

Cords and tassels for colors.

Covers, cot.

Flags:

Advertising.

Post.

Storm.

Recruiting.

Handles:

Ax.

Hatchet.

Pickax.

Shovel and spade.

Lockers, parts for.

Napthaline.

Oil, neatsfoot.

Paint for bedsteads.

Pins, tent.

Rings, national color and standard.

Staffs, color, parts for.

Sticks, drum.

Stovepipe, tent.

Tent parts.

Trumpet crooks and mouthpieces.

Veterinary Supplies

Bandages.

Bottles, medicine.

Boxes, tin, ointment.

Capsules.

Corks.

Cotton, absorbent.

Gauze, antiseptic.

Labels.

Oakum.

Plaster, adhesive.

Silk for ligatures.

Soap, castile.

Sponges.

Veterinary medicines.

And such other supplies of the Quartermaster Corps of *minor value* which are *consumed* in the maintenance and upkeep of the public service. Also such articles as are not listed herein which become permanent fixtures to public buildings, machinery, etc. These and all other articles listed in List B herein to be expended by the accountable officer *only* when issued to troops or for repairs and when installed as permanent fixtures.

Property in Hands of Militia When Mustered into Federal Service

83. As soon as the militia are actually sworn into the service as volunteers they pass from the control of the State to that of the U. S. Thereafter the Federal Government will subsist, care, transport and have exclusive charge of them as volunteers.

84. Each organization called forth preparatory to muster in, at a late date, as U. S. Volunteers, will take with it to the mobilization camp all serviceable property (Federal, State and organization) pertaining to the organization and suitable for field service.

85. As soon as a regiment or other separate organization has been mustered into the service of the U. S., the mustering officer or his assistant, with a representative of the State, will inventory and inspect all property belonging to the U. S. taken by such troops into Federal service.

86. The Governor or his representative will invoice all articles of such U. S. property as pertains to the Quarter-

master Corps. to the regimental Quartermaster. Any State property taken into the Federal service will be taken up by the Quartermaster, an inventory made by the mustering officer, a copy of such inventory being furnished to the Quartermaster General.

CHAPTER V

Finance

88. Quartermasters of organizations and acting Quartermasters are not required to be bonded. A line officer detailed for duty in the Quartermaster Corps is required to have a \$10,000 bond.

89. Usually the only money accountability required of organization Quartermasters is for funds necessary on a march, for purchasing forage, fuel, water, renting camp sites, and in some cases purchasing rations and engaging services of mechanics.

90. The payment of troops and civilian employes is usually made by an officer of the Quartermaster Corps attached to Division or line of communications.

91. **Engagement of Services, Personal and Non-Personal:** All services, personal and non-personal, required in connection with troops in the field will be obtained under authority of the commander of the Field Army or of a division commander, when required in connection with a division, or commander of the line of communication when required in connection with the line of communication and the base.

92. **Personal Services:** All employments in positions having a classified status under Civil Service Rules and Regulations, such as clerks, stenographers and typewriters, typewriters, copyists, messengers, mechanics, engineers, firemen, civil engineers, superintendents of construction, draftsmen, superintendent of labor, wagonmasters, forage-masters, pack-masters, veterinarians, etc., must be reported

to the Chief of the Quartermaster Corps at the end of the month in which hired. Report to show name, designation, rate of pay and date of hire.

93. When employes filling positions having a classified status (as per paragraph 92) are separated from the service (by death, discharge, resignation or otherwise), names, designation, rate of pay, and date of separation will be reported to the Chief of the Quartermaster Corps at the end of the month in which the separation occurred.

94. **Non-Personal Services:** Non-personal services consist of services procured under contract (not including employes hired under contract or oral agreement), under written proposal, and written acceptance and under oral agreement (open market).

95. When making purchases in the field or in camp it is always well to get prices informally from all dealers that can be reached and this fact noted on face of voucher.

96. However, purchases without inviting competition are authorized in the following cases:

(a) When cost of supplies does not exceed \$500.

(b) In an emergency when there is not time for inviting competition.

(c) When exceptional articles are required or prices are fixed.

97. In all other cases circular to bidders should be sent out inviting bids in writing, Q. M. C., form 119. For advertising in newspapers the written authority of the Secretary of War is necessary, for the Revised Statutes prohibit publishing public advertisement in any newspaper except by written authority from the head of the Department.

98. A guaranty must be furnished with each bid when the value of supplies bid on exceeds \$500. In lieu of written guaranty a certified check for at least 15% of amount of the bid may be furnished. The guaranty or

check is held as security that the bidder will enter into contract if awarded supplies offered, or in case no formal contract is required, that supplies are delivered in accordance with terms of bid.

99. Bonds must be furnished in all cases where the value of the supplies to be delivered under a contract is \$5,000 or more and the time within which delivery is to be made is more than sixty days. In other cases it is optional with the Quartermaster. A bond is intended to protect the government in case the contractor fails to fulfill the terms of his contract.

100. Payment for supplies or services in a foreign country should be in U. S. currency, this to avoid question of exchange. By all means get receipts in terms of U. S. currency, even should it be necessary to handle the foreign coin to make change.

101. Civilian employes traveling under competent orders will be allowed reimbursement for ticket, over shortest usually traveled route, transfers to and from railroad station and for sleeping car ticket.

102. Reimbursement for meals, including tips, will not exceed \$4.50, or in lieu of reimbursement for meals and tips, civilian employes, when their orders so prescribe, may be allowed a flat per diem allowance not exceeding four dollars when traveling and when on duty for the first thirty days at places designated in their orders for performance of temporary duty, except when traveling on army transports or when accompanying troops in field in time of war.

103. Eight hours shall constitute a day's work for all mechanics, laborers, and workmen employed by the Q. M. C., except (a) crews of vessels, (b) employes with wagon and truck trains engaged in field service, (c) cooks, overseers of laborers. Exceptions in case of others on account of exigencies of the service must be promptly reported.

104. Payment for a full calendar month's service without regard to number of days:

When service commences on an intermediate day of the month, 30 days will be assumed as the length of the month, whatever be the number of days therein.

When service terminates on an intermediate day of the month, the actual number of days during which service was rendered in that calendar month will be allowed.

Service commencing in February will be calculated as though the month contained 30 days. When services commence February 28, 3 days will be allowed in that month.

If service commences on 31st day of any month, payment will not be made for that day.

105. Enlisted men will not be given extra duty pay while receiving 20% increase for foreign service or in time of war.

106. In lieu of transportation and subsistence to his home a discharged soldier may, if he so elects, receive two (2) cents a mile, except for sea travel, from the place of his discharge to the place of his enlistment.

107. A fifty-dollar reward will be paid to any civil officer or civilian for the apprehension and delivery of a deserter from the military service or for the return of an escaped military prisoner. (See Par. 120, A. R.)

108. An officer receiving commutation for his heat allowance is not permitted to purchase fuel from the Q. M. C. at contract price.

109. Blank forms necessary for money accounts in the field:

Account current.....	W. D. form No. 320
Invoice and receipt.....	W. D. form No. 326
Abstract of funds.....	W. D. form No. 321
Abstract of funds.....	W. D. form No. 324
Abstract of disbursements.....	W. D. form No. 329
Supplies and services, N. P.	W. D. form No. 330

Service, pay roll	W. D. form No. 334
Services, personal.....	W. D. form No. 335
Receipt for cash payment.....	Q. M. D. form No. 137
Short term lease, camps, etc.	Q. M. C. form No. 104
Deposit of funds	Q. M. D. form No. 35
Estimate of funds.....	Q. M. C. form No. 34

Detailed instructions are printed on these blanks for preparing same.

110. A field desk when packed must not exceed 35 pounds in weight, except for brigade and division headquarters. The contents include records, manuals, blanks, and stationery. The stationery for a single desk should not exceed the following, which is prescribed as an allowance for 30 days. This allowance applies also to each field desk not furnished by the Quartermaster Corps:

	If type- writer is supplied	If type- writer is not supplied
Bands, rubber, No. 18, gross.....	1	1
Blocks, memo or scratch note, for pencil.....	4	4
Books, duplicating, letter size.....	2	2
Envelopes, official.....	200	100
Erasers:		
Rubber, ink and pencil.....	1	2
Rubber, typewriter.....	1	
Steel.....	1	1
Fasteners, paper, boxes.....	1	1
Files, office:		
General order.....	1	1
Special order.....	1	1
Ink:		
Black, powdered, packages.....	6	6
Red, powdered, packages.....	3	3
Mucilage (or paste), bottle or tube.....	1	1
Paper:		
Blotting, 4 by 9½ inch, sheets.....	6	6
Blotting, 12 by 19 inch, sheets.....	2	2
Carbon, letter size, sheets.....	25	
Letter, typewriter, quires.....	5	
Pencils:		
Indelible.....	4	4
Lead.....	2	2
Colored (blue and red).....	2	2
Penholders.....	4	4
Pens, steel.....	24	24
Pins, office, cone.....	1	1
Ribbons, typewriter, record.....	2	
Ruler, office, 12-inch.....	1	1
Shears, office.....	1	1
Tape, office, spool.....	1	1
Twine, wrapping, ball.....	1	1
Wax, sealing, ounce.....	3	3

110 A—A set of stencil plates consists of the following articles:

- 2 full alphabets, Roman capitals (including the usual mark for "and").
- 2 series of numbers from 0 to 9.
- 1 cake of marking paste in tin box.
- 1 sponge.
- 1 stencil brush.

One set of numbers and letters is 1 inch high, the other ½ inch. These plates are issued in tin boxes with hinged lids.

111. One set Farriers' and Blacksmiths' Tools, Complete except anvil.

1 Anvil, small, not to exceed 75 pounds.

(Not carried in chest, packed separately, but included in chest of tools carried on return.)

1 Apron, leather.

2 Chisels, cold, handled.

1 Chisel, hot, cleaver.

1 Chisel, cold, hand.

1 Clinch cutter, (Buffer).

1 Clinch iron.

1 Dividers.

1 File, flat, 12 inch, Bastard.

1 Hammer, ball pein.

1 Hammer, riveting.

1 Hammer, shoeing.

1 Hammer, sledge.

1 Hardie.

1 Knife, farrier.

1 Nippers, hoof cutting.

1 Nippers, hoof paring.

1 Pinchers.

1 Pritchel.

3 Punches, hand, round.

6 Rasps, 16 inch.

1 Set stocks and dies, $\frac{1}{4}$ to $1\frac{1}{4}$ inches.

1 Tong, shoeing.

2 Tongs, large.

1 Vise, small.

2 Wrenches, monkey, 18 inch and 12 inch.

1 Wrench, "S."

Note:—This chest with complete set of tools will be carried on returns and invoiced as 1 Chest Farriers and Blacksmiths Tools, Complete.

112. One set saddlers' tools, complete.

- 1 Awl, collar.
- 1 Awl, round.
- 18 Blades, awl, 3 each 6 sizes.
- 1 Brush, glue, small.
- 1 Can, oil.
- 1 Chisel, cold.
- 1 Creaser, iron.
- 1 Cup, tin, pint.
- 1 Dividers, pair.
- 1 File, round (taper, 6 inch).
- 1 Hammer, riveting.
- 1 Hammer, shoe.
- 1 Hammer, tack.
- 1 Horse, stitching, (cast iron).
- 1 Knife, guage.
- 1 Knife, head.
- 1 Knife, round.
- 1 Knife, shoe.
- 1 Nippers, medium.
- 1 Punch, revolving, 6 tube.
- 2 Punches, round, Nos. 2 and 9.
- 1 Pliers, small.
- 1 Rule, 36 inch.
- 1 Screwdriver, small.
- 1 Set, rivet.
- 1 Shears, pair.
- 1 Slicker, glass.
- 1 Stone, oil.
- 2 Thimbles.
- 1 Tickler.
- 1 Tool, claw.
- 1 Tool, edge, common.
- 1 Vise, small.

Note:—This chest with complete set of tools will be carried on returns and invoiced as 1 Chest Saddlers' Tools. Complete.

113. One set car carpenters' and wheelwrights' tools, complete.

- 1 Axe, hand.
- 1 Auger, hollow.
- 8 Bits, auger, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 inch.
- 1 Bit, screwdriver.
- 1 Brace, ratchet, 12 inch.
- 1 Calipers, pair.
- 8 Chisels, firmer, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$, 2 inch.
- 6 Files, saw, taper, 5 inch.
- 1 Gauge, thumb, mortise.
- 1 Hammer, claw.
- 1 Knife, drawing.
- 1 Oiler.
- 1 Plane, smooth.
- 1 Plane, jack.
- 1 Plane, jointer.
- 1 Rasp, wood, 12 inch.
- 1 Rule, 2 foot.
- 1 Saw, hand, cross cut.
- 1 Saw, rip, hand.
- 1 Set, saws, compass, with handle.
- 1 Screwdriver, hand.
- 1 Set, saw.
- 1 Spoke pointer.
- 1 Square, try.
- 1 Square, steel, 2 foot.
- 1 Stone, oil.
- 1 Vise, block.
- 1 Wrench, monkey, 10 inch.

Note:—This chest with complete set of tools will be **carried on returns** and **invoiced** as 1 Chest Carpenters' and Wheelwrights' Tools, Complete.

114. A "Veterinarian's field equipment" consists of the following:

- (a) Veterinarian's field chests—Each set to consist of 5 chests. Of the two large chests, one is supplied with 10 empty bottles, 14 or 16 ounces, height not to exceed $7\frac{1}{2}$ inches; the other containing 18 empty round jars with screw tops, $3\frac{3}{4}$ inches high by $2\frac{3}{4}$ inches in diameter. These two chests with the other three chests (to be supplied empty) to contain the veterinarian's field supplies.
- (b) Instruments and appliances for field chests—
- 1 casting harness.
 - 1 catheter.
 - 1 clipper, hand.
 - 1 drenching bottle, rubber.
 - 1 flat, tooth, straight and angular.
 - 1 graduate glass.
 - 1 hoof knife set, in roll.
 - 1 stomach tube, with stylet.
 - 1 syringe, metal, 2-ounce.
 - 1 tray, enameled, 10-inch.
- (c) Veterinarian's saddle-bag (for contents, see Par. 115).
115. A veterinarian's saddle-bag should contain the following articles:
- 1 hypodermic syringe.
 - 1 hypodermic case.
 - 1 tray, tin (to be filled with sponge or gauze when packed).
 - 1 case, surgical, small, vest-pocket size, to contain the following:
 - 1 scalpel.
 - 1 bistoury, probe pointed.
 - 1 bistoury, sharp pointed.
 - 1 tenaculum.
 - 1 probe, silver, jointed, 2 sections.
 - 1 director, grooved.

2 forceps, artery, with catch.

6 needles, suture, curved and half curved, assorted sizes.

1 scissors, curved or flat.

The aforementioned outfit forms a part of a veterinarian's "Field equipment."

116. The following is a suggested list of veterinary supplies. Under ordinary conditions, it should suffice for 100 animals for 10 days:

Medicines—

3 aloes balls.

$\frac{1}{4}$ pound ammonia, aromatic spirits.

$\frac{1}{4}$ pound ammonia liniment.

$\frac{1}{4}$ pound charcoal.

$\frac{1}{2}$ pound chloronaptholeum or kreso.

$\frac{1}{2}$ pound colic mixture.

$\frac{1}{2}$ pound cosmoline.

$\frac{1}{4}$ pound iodine tincture.

$\frac{1}{2}$ pound lime, chloride of.

3 ounces mercury, bichloride of.

$\frac{1}{4}$ pound oil, linseed.

$\frac{1}{4}$ pound oil, olive.

$\frac{1}{4}$ pound ointment, antiseptic.

$\frac{1}{4}$ pound tar, pine.

$\frac{1}{4}$ pound three sulphates (copper, iron, and zinc).

Dressings—

$\frac{1}{4}$ pound absorbent cotton.

1 package antiseptic gauze.

Bandages—

1 flannel.

4 cotton, white.

1 pound oakum.

1 pound soap, castile.

117. A farrier's instrument pocket case consists of the following articles:

- 1 canvas roll.
- 1 scalpel.
- 1 hoof knife.
- 1 clinical thermometer.
- 1 pair curved scissors.
- 1 pair dressing forceps.
- 1 pair artery forceps.
- 1 director, grooved.
- 1 bistoury, curved, blunt.
- 1 probe.
- 1 skein, silk.
- 6 needles, curved.

118. A horseshoer's emergency equipment consists of the following articles:

- 1 shoeing hammer.
- 1 pincers.
- 1 hoof knife.
- 1 jointed horseshoe, No. 2.
- 1 rasp.

Horseshoe nails, assorted.

$\frac{1}{4}$ pound oakum.

1 four-ounce bottle chlorin or kreso.

119. A squad housewife (A. R. 1217) consists of the following articles (may be carried as baggage):

- 1 pair scissors.
- 3 needles, large.
- 24 needles, assorted sizes.
- 20 pins.
- 8 safety pins.
- 1 thread (white, black, and olive drab) card.
- 24 buttons, olive drab shirt.
- 48 buttons, underwear (24 for undershirts and 24 for drawers).

120. The equipment of a commissary chest consists of the following articles:

3 pencils, lumber.

1 plier, combination.

$\frac{1}{2}$ rosin, pound.

1 saw, hand, crosscut.

1 saw, meat, 22-inch.

1 scales, spring balance.

1 scoop, large.

1 scoop, small.

1 scraper, box.

1 screw driver.

1 shears, tinner's.

8 sheets, steel, 12 by 12 inches.

1 solder, prepared, pound.

1 steel, butcher's.

1 steelyard.

1 tap, borer.

8 candlesticks, galvanized iron spiked bottom and

1 cleaver, 8-inch cut.

2 drills, twist.

2 faucets, wood, 8-inch.

1 funnel, quart.

1 hammer, claw and helve.

6 hooks, meat, for racks.

1 iron, soldering.

1 knife, butcher, 8-inch.

1 knife, butcher, 10-inch.

1 measure, liquid, quart.

6 needles, packing.

1 opener, box.

3 openers, can.

2 blades, meat saw, 22-inch.

1 brace, carpenter's.

ALLOWANCE OF HEAVY TENTAGE, INCLUDING PERSONAL BAGGAGE FOR OFFICERS
(NOTE.—The allowance authorized to be transported in field trains is fixed in Section I, Tables 3-C, Tables of Organization.)

Individual or organization	Pyramidal, small, complete		Pyramidal, large, complete			Wall, complete		Storage, complete (storage of supplies)	Ward, complete (quarters for sick)	Hospital, complete	Personal baggage
	Quarters and office	Storage of supplies	Men's quarters	Office	Guard	Storage of supplies	Canvas screen for latrine ^a	Mess	Office		
Major general.....	3										Pounds 1,000
Brigadier general.....	3										700
Colonel.....	2										400
Lieutenant colonel, major	2										400
Captain.....	1										200
Lieutenant, veterinarian.	b1										150
Enlisted men.....			(c)								
Company (see also ambulance and field hospital companies below).....				1	d2	1	1	1			
Battalion headquarters.....		1			3		1	1	1	e2	
Regimental headquarters.....							1	1			
Regimental sanitary detachment.....				1				1			
Ambulance company.....				1							
Field hospital company.....				1			1			6	4
Brigade headquarters.....							1	1			
Division headquarters.....							2	2	1		
Civilian employees:											
Clerk or veterinarian.....											
Other civilian employees.....	b1		(c)					(f)			

^a Pending supply, worn-out or condemned tentage may be used.

^b For 2.

^c 1 to every 8 men.

^d For separate battalion only.

^e For regimental quartermaster.

^f 1 for mess for every 15 men.

121 A. The following table shows the number of pins, poles, and stoves (when prescribed) for each kind of tent.

Kind of Tent	Pins			Poles						Stoves, etc.					
	Large	Small	Shelter	Pyramidal and tripods	Ridge, jointed	Ridge, regulation	Ridge, tropical	Shelter tent	Upright, regulation	Upright, small	Shields, galvanized iron	Stoves, regulation	Stovepipe elbows	Stovepipe joints	Spark arresters
Hospital, and fly..	36	26					1		2	4	1	1	2	6	1
Pyramidal, large..	28	28		1								1		5	1
Pyramidal, small, and fly.....	24	12							1			1		4	1
Shelter, dismount- ed.....			10					2							
Shelter, mounted..			10												
Storage, and fly....	44	38			1				3	8	1	1	2	7	1
Wall, and fly.....	18	26				1			2		1	1	2	7	1
Ward.....	68	52							4	4		4		28	4

78505°—15—36

122. Dimensions of hospital tent (tropical):

Height when pitched.....	12 feet.
Height of base of pocket.....	10 feet 6 inches.
Width of pocket at base.....	1 foot 6 inches.
Height of pocket.....	1 foot 6 inches.
Length of ridge.....	14 feet 3 inches.
Width at base.....	15 feet 7 inches.
Height of wall.....	4 feet 7 inches.
Wall eaves.....	3 inches.
Height of doors.....	10 feet 3 inches.
Width of doors at bottom.....	1 foot 6 inches.
Width of doors at top.....	4 inches.
From base of pocket to wall.....	9 feet 2½ inches.
Net weight	125 pounds.

Dimensions of hospital tent fly:

Length, on ridge.....	18 feet 4 inches.
Width	25 feet 6 inches.
Net weight	52 pounds.

123. Dimensions of hospital ward tent:

Height when pitched.....	11 feet.
Length at base.....	50 feet.
Length at ridge.....	36 feet.
Width	16 feet.
Height of wall.....	4 feet 6 inches.
Wall eaves	3 inches.
Height of doors.....	8 feet 6 inches.
Width of doors	4 feet.
From top of ridge to wall, at side.....	10 feet 6 inches.
From top of ridge to wall, at corner..	11 feet 9 inches.
Net weight	330 pounds.

124. Dimensions of pyramidal tent:

Base	16 feet square.
Top	18 inches square.
Height when pitched.....	11 feet.
Height of wall.....	3 feet.
Wall eaves	2½ inches.
Height of door.....	7 feet.
Width of door.....	26 inches.
Net weight.....	103 pounds.

125. Dimensions of storage tent:

Height when pitched.....	13 feet.
Length of ridge.....	20 feet 5 inches.
Width	17 feet 10 inches.
Height of wall.....	5 feet 2 inches.
Wall eaves.....	4 inches.
Height of doors.....	13 feet.
Width of doors at top.....	2 inches.
Width of doors at bottom.....	1 foot 3½ inches.

From top of ridge to wall..... 11 feet 10 inches.

Net weight160 pounds.

Dimensions of fly, storage tent:

Length of ridge..... 20 feet 5 inches.

Width 25 feet.

Net weight 59 pounds.

126. Dimensions of wall tent (large):

Height when pitched..... 11 feet.

Length of ridge..... 14 feet 3 inches.

Width 14 feet 6 inches.

Height of wall..... 4 feet 6 inches.

Wall eaves 3 inches.

Height of doors..... 11 feet.

Width of doors at bottom..... 1 foot 6 inches.

Width of doors at top..... 4 inches.

From top of ridge to wall..... 9 feet 10 inches.

Net weight110 pounds.

Dimensions of fly, wall tent (large):

Length on ridge..... 14 feet 4 inches.

Width 21 feet 6 inches.

Net weight 37 pounds.

127. Dimensions of wall tent (small):

Height when pitched..... 8 feet 6 inches.

Height to base of pocket..... 7 feet 6 inches.

Width of base of pocket..... 1 foot.

Height of pocket..... 1 foot.

Length of ridge..... 9 feet 2 inches.

Width at base..... 8 feet 11½ inches.

Height of wall..... 3 feet 9 inches.

Wall eaves 2 inches.

Height of doors..... 7 feet 3 inches.

Width of doors at bottom..... 1 foot.

Width of doors at top..... 2 inches.

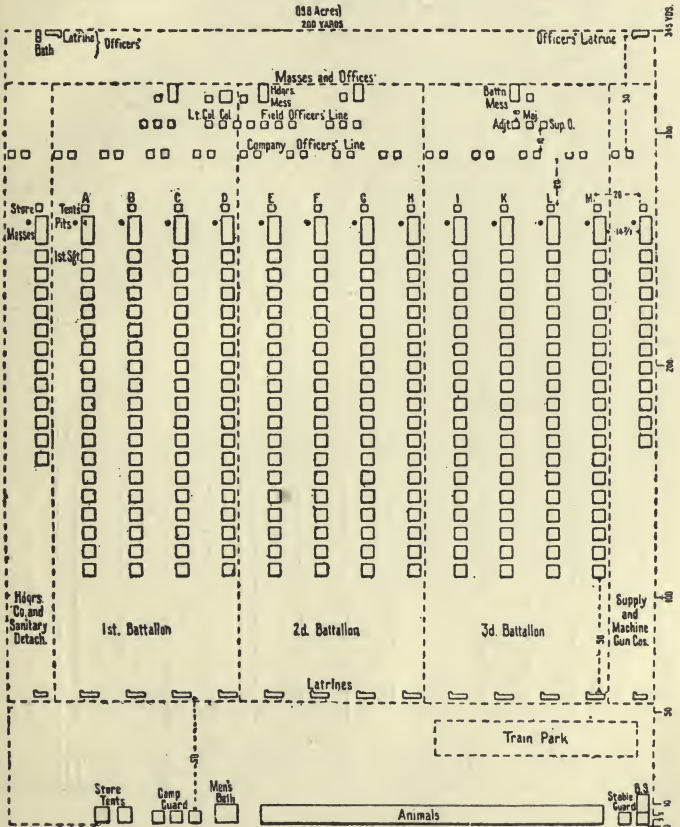
From base of pocket to wall..... 5 feet 5 inches.

Net weight49 pounds.

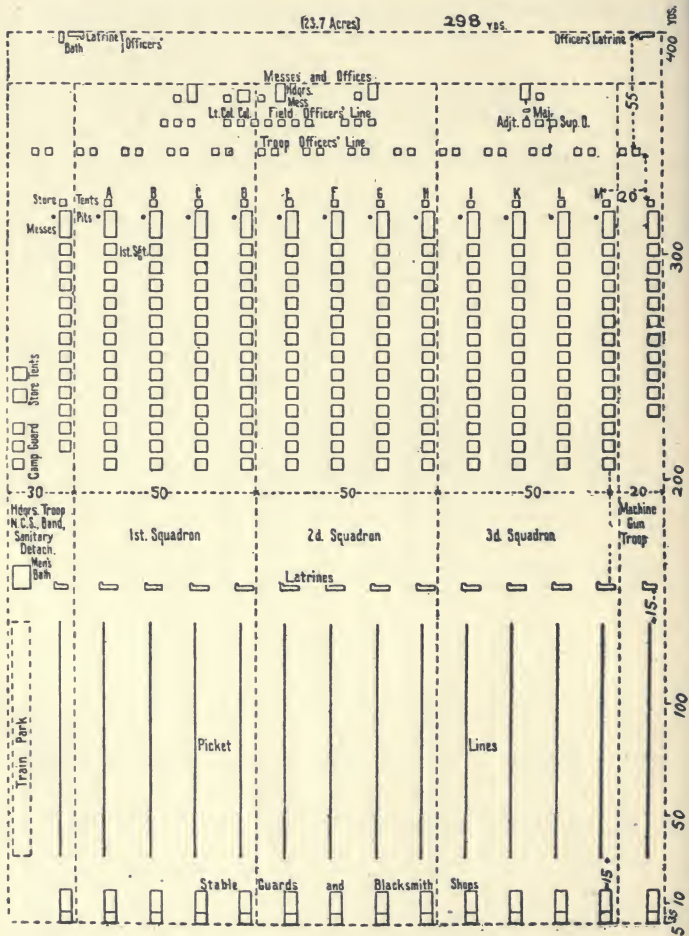
Dimensions of fly, wall tent (small):

Length on ridge11 feet 6 inches.
 Width15 feet 6 inches.
 Net weight17½ pounds.
 Net weight17½ pounds.

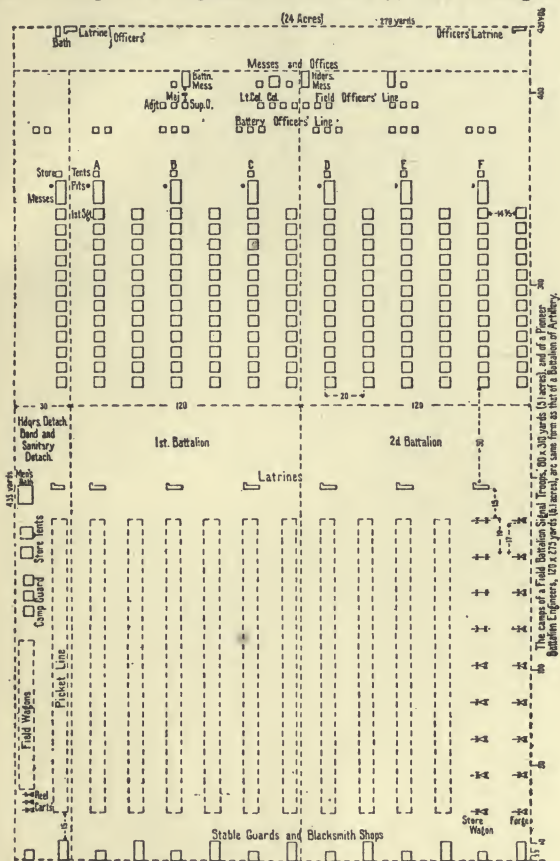
128. Camp of a regiment of infantry, war strength:



129. Camp of a regiment of cavalry, war strength:



130. Camp of a regiment of artillery, war strength:



131. War strength, in round numbers, road space, and dimensions of camps:

Units	War strength, in round numbers		Vehicles, including guns	Length of columns			Contracted camping space (troops and trains)	
	Men	Animals (horses and mules)		Organizations, including combat trains	Field trains without distance	Ammunition, supply, sanitary, engineer trains	Yards	approximate number of acres
Divisions:								
Infantry.....	22,000	7,500	900	10.3 mis.	11.8 mis.	3.6 mis.	.....	180
Cavalry.....	10,000	12,000	500	8.0 mis.	9.5 mis.	1.5 mis.	.....	150
Brigades:								
Infantry.....	5,500	520	67	1.7 mis.	2.0 mis.	.....	.....	19
Cavalry.....	2,500	2,900	53	1.5 mis.	1.9 mis.	.....	.....	18
Artillery.....	2,300	2,300	257	12.6 mis.	2.9 mis.	.....	.....	30
Smaller units (including attached sanitary troops):								
Infantry regiment.....	1,860	170	22	<i>Yards</i> 970	<i>Yards</i> 1,150	<i>Yards</i> 160 by 180	.....	6.2
Cavalry regiment.....	1,250	1,430	26	1,310	1,640	.....	200 by 200	8.2
Field artillery, light, regiment.....	1,150	1,150	128	22,240	2,500	.....	240 by 300	14.7
Field artillery, horse, regiment.....	1,150	1,560	131	2,670	2,970	.....	240 by 400	19.6
Field artillery, heavy, regiment.....	1,240	1,340	131	2,510	2,800	.....	260 by 300	16.0
Field artillery, mountain, regiment.....	1,100	1,160	.....	1,770	2,070	.....	80 by 380	6.2
Engineers, pioneer battalion.....	490	160	12	410	470	.....	50 by 200	2.0
Engineers, pioneer battalion (mounted).....	270	370	11	350	440	.....	50 by 260	2.6

132. Water—Approximate daily requirements:

1 gallon per man on march.

5 gallons per man in camp.

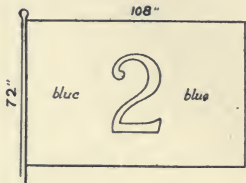

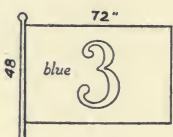

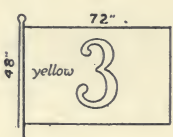

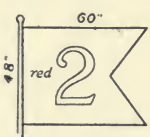

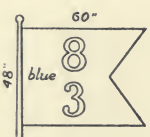

6 to 10 gallons per animal on march and camp.

(The above figures apply to water taken from streams, where animals are watered at the streams, and cooking water carried. In estimating the daily supply for permanent or semipermanent camps, where water is piped to kitchens, bath houses, etc., the requirements will be 25 to 30 gallons per man and 10 to 15 gallons per animal, depending on climatic conditions.)

Estimating quantity of water in stream:

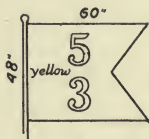
$B \times D \times V \times 10,800 = \text{gallons in 24 hours.}$ B = average width, D = average depth, V = average velocity (all in feet).

133. Distinguishing flags and lanterns:

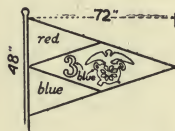
<i>Position of</i>	<i>Flag (by day)</i>	<i>Lantern (by night)</i>
<i>Field Army, Hdqrs.</i>		
<i>Infantry Division Hdqrs.</i>		
<i>Cavalry Division Hdqrs.</i>		
<i>Artillery Brigade Hdqrs.</i>		
<i>Infantry Brigade Hdqrs.</i>		

133.—Continued:

Cavalry Brigade Hdqrs.



Supply Train and Q. M. Depots

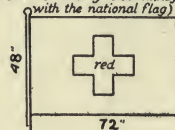


*Ammunition train
Distributing points and Depots*

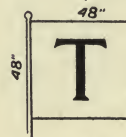


*(The red cross flag to be displayed
with the national flag)*

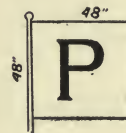
*Sanitary Train, Regimental Aid
& Dressing station, Sanitary
Column, Hospital, etc.*



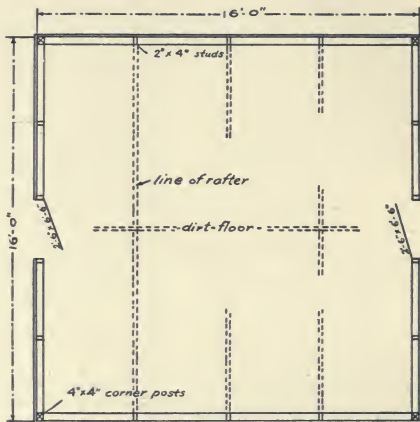
Telegraph station



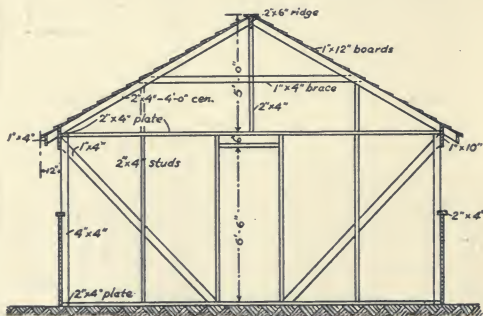
Post Office



134. Plans and bill of material for company kitchen when lumber is available. These are used in permanent or semipermanent camp:

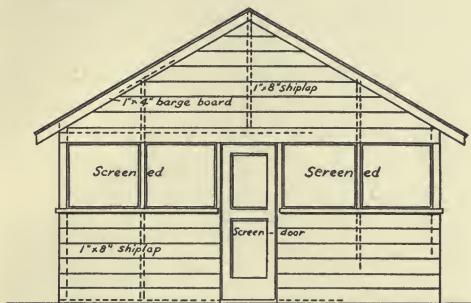


- PLAN -

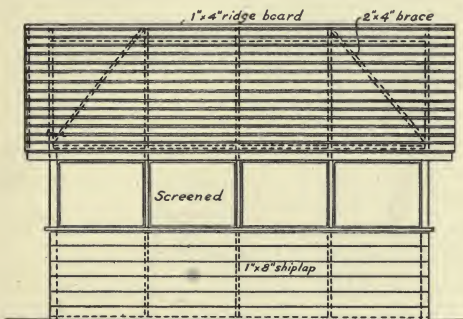


• CROSS SECTION •

134.—Continued:



•FRONT VIEW•



SIDE VIEW

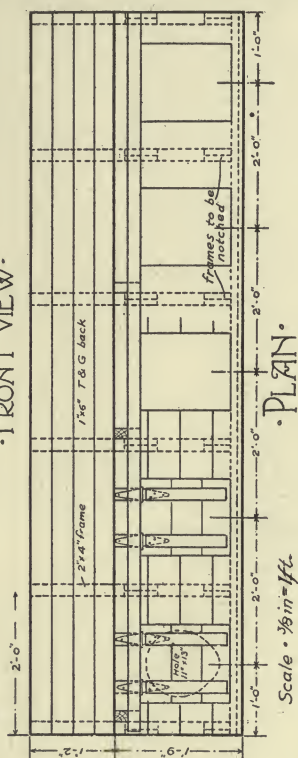
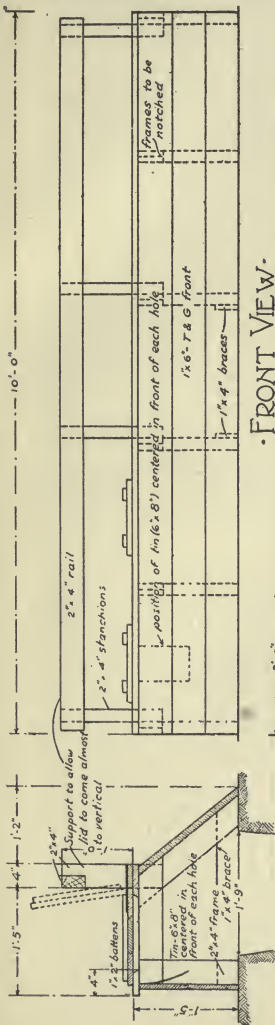
$\frac{1}{8}$ in \approx 1 ft.

134.—Continued:

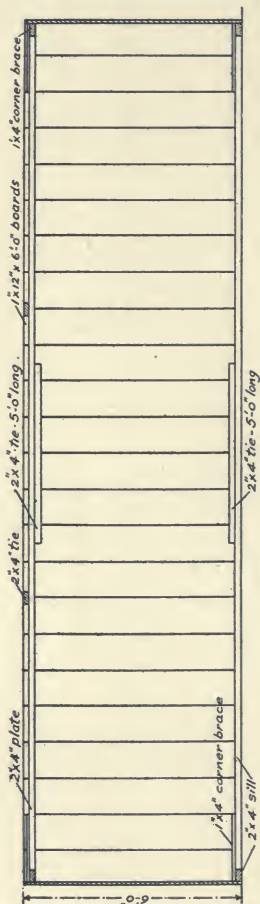
*Bill of Material for proposed
Company Kitchen. (wood)*

1 Pc	2"x 6"x 16'	ridge
2 "	4"x 4"x 14'	corner posts
7 "	2"x 4"x 14'	studs
2 "	2"x 4"x 10'	studs in gables
12 "	2"x 4"x 16'	plates & sill
4 "	1"x 4"x 12'	barge board
11 "	1"x 4"x 10'	braces
11 "	2"x 4"x 12'	rafters & braces
28 "	1"x 12"x 18'	roofing
12 "	1"x 8"x 16'	shiplap, sides
12 "	1"x 8"x 14'	" ends
9 "	1"x 8"x 18'	" gables
3 "	1"x 4"x 18'	rafter ends & ridge
2	2'6" x 6'6"	screen doors, complete
2 Pcs.	1"x 10"x 16"	frieze board
20 yds	screening,	36"
4 pkgs.	Tacks	
10	# 6 d	nails
15	" 8 d.	"
20	" 16 d.	"

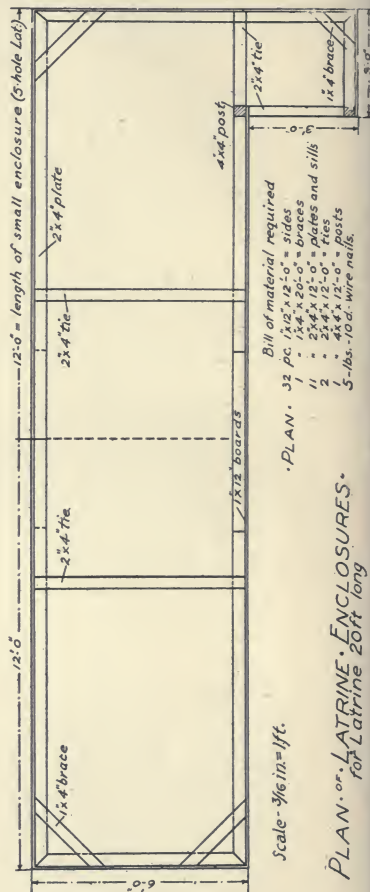
135. Plans and bill of material for one five-hole latrine:



136. Plans for latrine building:



LONGITUDINAL SECTION.



Bill of material required

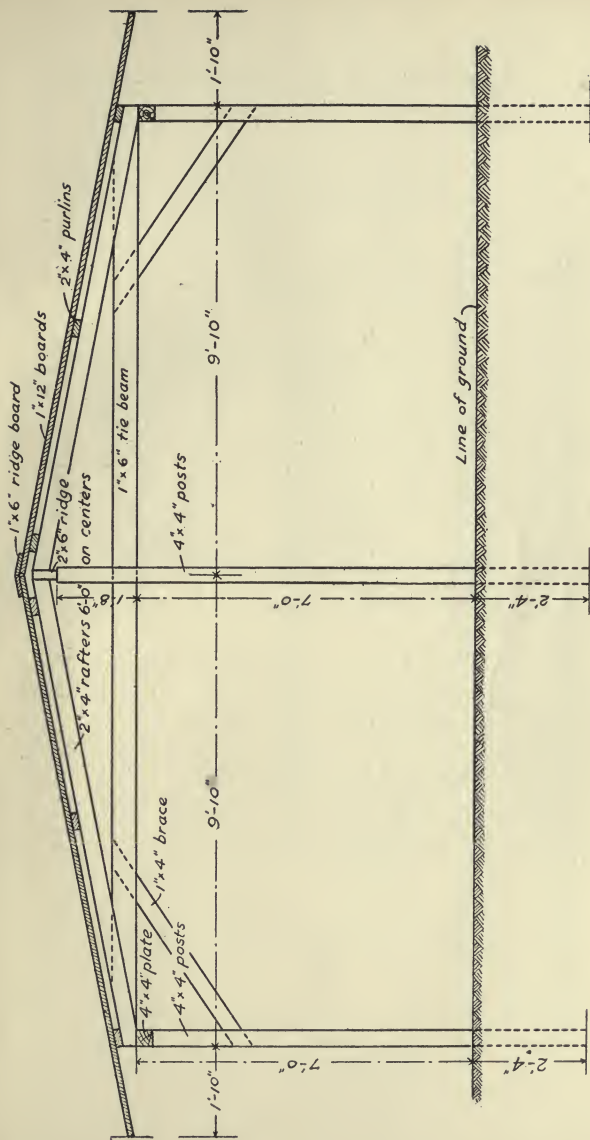
PLAN. 32 pc. 1"x12"x12'-0" = sides
 1 - 1"x4"x20'-0" = braces
 11 - 2"x4"x12'-0" = plates and sills
 2 - 2"x4"x12'-0" = ties
 1 - 4"x4"x12'-0" = posts
 5-lbs. 10 d. wire nails.

Scale - $\frac{3}{16}$ in. = 1 ft.

PLAN OF LATRINE ENCLOSURES
 for Latrine 20ft long

• PICKET LINE SHELTER •

137.



• CROSS SECTION •

Scale - 1/4 in = 1 ft.

137.—Continued:



137.—Continued:

Bill of material
for Picket Line shelter (19'-8"x96'-0")
Board roof.

9 Pcs.	4" x 4" x 18'	Exterior Posts
4 "	4" x 4" x 22'	Center "
1 "	4" x 4" x 12'	" "
16 "	4" x 4" x 12'	Plates
8 "	2" x 6" x 12'	Ridge
12 "	2" x 4" x 14'	Purlins at ends
36 "	2" x 4" x 12'	Interior purlins
34 "	2" x 4" x 10'	Rafters
18 "	1" x 4" x 10'	Braces
9 "	1" x 6" x 20'	Tie beams
200 "	1" x 12" x 12'	Roofing
4 "	1" x 6" x 14'	Ridge board at ends
12 "	1" x 6" x 12'	" " interior sections
20 lbs	16 d	Wire nails
50 "	8 d	" "



**THIS BOOK IS DUE ON THE LAST DATE
STAMPED BELOW**

**AN INITIAL FINE OF 25 CENTS
WILL BE ASSESSED FOR FAILURE TO RETURN
THIS BOOK ON THE DATE DUE. THE PENALTY
WILL INCREASE TO 50 CENTS ON THE FOURTH
DAY AND TO \$1.00 ON THE SEVENTH DAY
OVERDUE.**

MAR 17 1933

*ukimut
ppx So.*

YB 04261

355537

Williams

UC32

W6

UNIVERSITY OF CALIFORNIA LIBRARY

